

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

THE NIELSEN COMPANY (US), LLC,

Plaintiff,

v.

TVISION INSIGHTS, INC.,

Defendant.

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**Redacted - Public Version**

C.A. No. 22-1345-CJB



**LETTER TO THE HONORABLE CHRISTOPHER J. BURKE FROM  
ANDREW E. RUSSELL IN SUPPORT OF TVISION INSIGHTS, INC.'S  
MOTION TO STAY PENDING INTER PARTES REVIEW**

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Dated: January 25, 2024

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January 25, 2024

**BY CM/ECF & HAND DELIVERY**

The Honorable Christopher J. Burke  
U.S. District Court for the District of Delaware  
J. Caleb Boggs Federal Building  
844 N. King Street  
Wilmington, DE 19801-3556



Re: *The Nielsen Company (US), LLC v. TVision Insights, Inc.*, C.A. No. 22-1345-CJB

Dear Judge Burke:

TVision moves to stay the patent-related portion of this case pending resolution of *inter partes* reviews of the single asserted patent. The PTAB has instituted IPR on the asserted patent-in-suit.<sup>1</sup> All three factors that this Court considers in deciding whether to stay a case favor staying this case until the conclusion of the IPR. First, staying this case will simplify the invalidity and infringement issues for trial, as the IPR has the potential to eliminate all asserted claims. Second, staying the patent related portion of the case avoids wasteful and duplicative litigation on claims that may be invalid, as fact discovery cut off is eight months away, no fact witness depositions have been scheduled or taken, no terms have been construed,<sup>2</sup> expert discovery has not begun, and trial is almost two years away. Third, a stay would not unduly prejudice Nielsen, because it is not a direct competitor of TVision, and because TVision timely filed both its IPR petitions and this motion.

**I. Staying The Patent Portion of This Case Will Simplify Issues For Trial**

“This Court has typically considered three factors when deciding a motion to stay: (1) whether granting the stay will simplify the issues for trial; (2) the status of the litigation, particularly whether discovery is complete and a trial date has been set; and (3) whether a stay would cause the non-movant to suffer undue prejudice from any delay, or allow the movant to gain a clear tactical advantage.” *Princeton Digit. Image Corp. v. Konami Digit. Ent. Inc.*, C.A. No. 12-1461-LPS-CJB, 2014 WL 3819458, at \*2 (D. Del. Jan. 15, 2014) (Burke, J.).

The first factor—whether a stay will simplify the issues for trial—strongly supports a stay of the patent portion of the case here, because all the asserted claims in this litigation may be eliminated or narrowed in the IPR. This Court has consistently found that the first factor strongly supports a stay when the claims at issue are subject to an instituted IPR. *E.g.*, *360Heros, Inc. v. GoPro, Inc.*, C.A. No. 17-1302-LPS-CJB, D.I. 132 (D. Del. June 5, 2019) (Burke, J.) (granting

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<sup>1</sup> Ex. 1, Decision Granting Institution, *TVision Insights, Inc. v. The Nielsen Company (US), LLC*, IPR2023-01014 (PTAB July 11, 2023), Paper 10.

<sup>2</sup> The agreed not to propose any claim terms for the Court to construe. *See* D.I. 71, 72.

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stay when asserted claims were at issue in the IPR); *Princeton*, 2014 WL 3819458, at \*2, \*5 (granting stay when “[a]ll but six of the 23 patent claims are at issue in the IPR”).

In the institution decisions here, the PTAB evaluated three separate grounds and determined that TVision had established “it is highly likely that Petitioner will prevail.” (Ex. 1 at 18, 35, 36, 46, 52.) All asserted claims are challenged in the instituted IPRs. (*Compare* Ex. 1 with Ex. 2, 5/26/23 Nielsen Initial Infringement Contentions, Cover Pleading.) This reflects the strength of TVision’s invalidity positions and a high likelihood that the IPR will eliminate the need of the patent related issues for trial. Because the PTAB has found “it is highly likely that Petitioner will prevail,” there is a “very strong likelihood” that the IPRs will eliminate the patent related issues for trial. *454 Life Scis. Corp. v. Ion Torrent Sys., Inc.*, C.A. No. 15-595-LPS, 2016 WL 6594083, at \*3 (D. Del. Nov. 7, 2016).

## **II. Staying The Patent Portion of This Case Avoids Wasteful And Duplicative Litigation**

The second factor—status of the litigation—also strongly favors a stay of the patent related portion of the case. Courts in this District widely recognize that granting a stay early on in the case prevents the court and parties from spending unnecessary resources on invalid claims. *Princeton*, 2014 WL 3819458, at \*3 (citing *Gioello Enters. Ltd. v. Mattel, Inc.*, No. C.A. No. 99-375 GMS, 2001 WL 125340, at \*2 (D. Del. Jan. 29, 2001)). Although the parties have engaged in some preliminary written discovery, undoubtedly “there is still a ways to go before trial.” *Netgear*, 2022 WL 17337924, at \*1. Currently, the fact discovery cutoff is eight months away, no documents specific to the patent-at-issue have been produced, no fact depositions have been scheduled or taken, expert discovery has not begun, no motions for summary judgment have been filed, and trial is almost two years away.

The status of this case is comparable to or better than others in which this Court granted a stay. For instance, in *Netgear*, this Court stayed the case when “no *Markman* opinion has yet issued, fact discovery [had] not end[ed] . . . , only one deposition had been taken, and summary judgement and trial are still to come.” *Netgear*, 2022 WL 17337924, at \*1. In *Princeton*, this Court found the status of litigation favored a stay, when “most of the significant case events are well in the future . . . [including] further *Markman* hearings, the completion of expert discovery and the filing of case dispositive motions.” *Princeton*, 2014 WL 3819458, at \*4. Thus, like in those cases, here, the second factor strongly favors stay.

## **III. TVision’s Request Is Timely And A Stay Would Not Unduly Prejudice Nielsen**

Finally, the third factor—lack of undue prejudice—also favors a stay. Nielsen would not be unduly prejudiced because TVision’s IPR petition was timely, TVision’s request for a stay is timely, and TVision and Nielsen are not direct competitors.

First, TVision timely filed its IPR petition within its one-year statutory deadline following Nielsen’s service of the complaint in this action. In fact, TVision filed its IPR petition four months before the one-year statutory deadline. Courts in this District routinely grant stays when the

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defendant has filed its petitions within the statutory timeframe allotted by 35 U.S.C. § 315. *See, e.g., Princeton*, 2014 WL 3819458, at \*4–5 (granting a stay where the defendant filed the IPR petition nearly “a year to the day” after the complaint); *SunPower Corp. v. PanelClaw, Inc.*, C.A. No. 12-1633-GMS, 2014 WL 12774919, at \*1 (D. Del. May 16, 2014) (same).

Second, TVision’s motion is timely. TVision contacted Nielsen to meet and confer regarding this stay motion two days after the PTAB instituted the IPR, and this motion was filed less than two weeks after the parties met and conferred. (*See* Ex. 3.) This timing—i.e., shortly after the PTAB instituted IPR—is “generally the ideal time at which to file such a request.” *See, e.g., 454 Life Scis. Corp.*, 2016 WL 6594083, at \*4.

Third, Nielsen will not be unduly prejudiced by a stay because it is not a direct competitor of TVision. D.I. 68, Counter Claims., ¶¶ 21, 107, 120. Therefore, here, “where there is no evidence of direct competition . . . this subfactor does not support denial of a stay.” *Kaavo Inc. v. Cognizant Tech. Sols. Corp.*, C.A. No. 14-1192-LPS-CJB, 2015 WL 1737476, at \*3 (D. Del. Apr. 9, 2015) (Burke, J.). Even if certain claims of the asserted patent were to survive the IPR, Nielsen still would not be unduly prejudiced by a stay because fact discovery could be completed on nearly the original schedule after the PTAB resolves the IPR as set forth in TVision’s forthcoming motion to consolidate.

In sum, the lack-of-prejudice factor weighs in favor of a stay.

#### IV. Conclusion

All three factors that this Court considers for a stay motion—simplification of issues for trial, status of the litigation, and lack of prejudice to plaintiff—strongly favor a stay of the patent related portion of the case pending the resolution of the IPR of the asserted patent. Because the IPR only involves the validity of the asserted patent, the three factor analysis does not impact TVision’s non-patent related antitrust counterclaims. Therefore, TVision respectfully requests the Court stay the patent related portion of this litigation pending resolution of the instituted IPR proceeding challenging the asserted patent.

Respectfully submitted,

/s/ Andrew E. Russell

Andrew E. Russell (No. 5382)

cc: Clerk of Court (by CM/ECF & Hand Delivery)  
All Counsel of Record (by CM/ECF & Email)

# Exhibit 1

Trials@uspto.gov  
571-272-7822

Paper 10  
Date: January 8, 2024

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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TVISION INSIGHTS, INC.,  
Petitioner,

v.

THE NIELSEN COMPANY (US), LLC,  
Patent Owner.

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IPR2023-01014  
Patent 11,470,243 B2

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Before TERRENCE W. McMILLIN, JOHN A. HUDALLA, and  
GARTH D. BAER, *Administrative Patent Judges*.

McMILLIN, *Administrative Patent Judge*.

DECISION  
Granting Institution of *Inter Partes* Review  
35 U.S.C. § 314

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## I. INTRODUCTION

### A. *Background and Summary*

TVision Insights, Inc. (“Petitioner”)<sup>1</sup> filed a Petition for *inter partes* review of claims 1, 4–6, 8, 9, 11–14, 16, and 18–20 of U.S. Patent No. 11,470,243 B2 (Ex. 1001, “the ’243 patent”). Paper 2 (“Pet.”) at 3. The Nielsen Company (US), LLC (“Patent Owner”)<sup>2</sup> filed a Preliminary Response. Paper 6 (“Preliminary Response” or “Prelim. Resp.”). In the Preliminary Response, Patent Owner indicates that it has filed a statutory disclaimer for independent claims 1, 9, and 16 of the ’243 patent and thus claims 4–6, 8, 11–14, and 18–20 (the “challenged claims”) are the only claims at issue. Prelim. Resp. 1–2 (citing Ex. 2002 (Request for Statutory Disclaimer)).

With our authorization, Petitioner filed a Reply to Patent Owner’s Preliminary Response (Paper 7 (“Reply”)) and Patent Owner filed a Sur-reply (Paper 9 (“Sur-reply”)). The Reply and Sur-reply were limited to arguments relating to discretionary denial. *See generally* Reply; Sur-reply.

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2020) (“The Board institutes the trial on behalf of the Director.”). The standard for institution is set forth in 35 U.S.C. § 314(a), which provides that *inter partes* review may

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<sup>1</sup> Petitioner identifies “TVision Insights, Inc.” as the real party-in-interest to this proceeding. Pet. 89.

<sup>2</sup> Patent Owner identifies “The Nielsen Company (US), LLC” as the real party-in-interest to this proceeding. Paper 3, 2. Patent Owner states that “it is a subsidiary, either directly or indirectly, of numerous parent entities, and that Brookfield Corporation (NYSE: BN; TSX: BN.TO), through its subsidiaries and investment funds and vehicles, indirectly owns 10% or more of Patent Owner The Nielsen Company (US), LLC.” *Id.*



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not be instituted unless “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” After considering the Petition, the Preliminary Response, the Reply, the Sur-reply, and the evidence of record, we institute an *inter partes* review as to claims 4–6, 8, 11–14, and 18–20 of the ’243 patent.

*B. Patent Owner’s Disclaimer of Claims 1, 9, and 16*

As indicated above, Patent Owner filed a statutory disclaimer of claims 1, 9, and 16 of the ’243 patent. *See* Ex. 2002. In view of Patent Owner’s statutory disclaimer, we treat claims 1, 9, and 16 as having never been part of the ’243 patent. *See Vectra Fitness, Inc. v. TNWK Corp.*, 162 F.3d 1379, 1383 (Fed. Cir. 1998) (“This court has interpreted the term ‘considered as part of the original patent’ in [35 U.S.C. §] 253 to mean that the patent is treated as though the disclaimed claims never existed.”) (citing *Guinn v. Kopf*, 96 F.3d 1419, 1422 (Fed. Cir. 1996)). And, because no *inter partes* review will be instituted based on disclaimed claims, we do not consider claims 1, 9, and 16 to be within the scope of this proceeding. *See* 37 C.F.R. § 42.107(e) (“No *inter partes* review will be instituted based on disclaimed claims”); *see also General Elec. Co. v. United Techs. Corp.*, IPR2017-00491, Paper 9 (PTAB July 6, 2017) (precedential) (denying institution of *inter partes* review in view of a statutory disclaimer of all challenged claims). Thus, we confine our analysis in this Decision to claims 4–6, 8, 11–14, and 18–20, the challenged claims of the ’243 patent that have not been disclaimed.



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*C. Related Proceeding*

The parties identify the following district court matter related to the '243 patent: *The Nielsen Company (US), LLC v. TVision Insights, Inc.*, 1:22-cv-01345 (D. Del.). Pet. 89; Paper 3, 2.

*D. The '243 Patent (Ex. 1001)*

The '243 patent is titled "Method and Apparatus to Capture Images." Ex. 1001, code (54). The '243 patent relates to audience measurement that includes methods and apparatus "to obtain exposure data for media exposure environment(s)" using "processor circuitry to determine audience information and content identifying data," in which the audience information includes captured images. *Id.*, code (57), 1:37–39. The '243 patent explains that audience measurement of media content such as broadcast television often involves collection of content identifying data and people data which can be combined to generate media exposure data. *Id.* at 1:43–55. The number of people exposed to media content can be calculated by measurement systems that capture a series of images and such information is used to provide "ratings data." *Id.* at 1:56–67. Techniques for identification by audience measurement systems include facial recognition. *Id.* at 1:67–2:3. Although facial recognition increases the accuracy of identification, the high resolution from such techniques require illumination sources that in turn require "a significant power drain" while the illumination sources can also be annoying to the audience.<sup>3</sup> *Id.* 2:42–56, 3:4–21. The '243 patent asserts there is a need to reduce or eliminate such "annoying aspects of the system." *Id.* at 3:24–30. The '243 patent purports to do this by providing

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<sup>3</sup> The challenged claims make no reference to illumination sources or any similar subject matter.

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methods and apparatus that require lower resolution for “the frames captured without the use of the illumination sources” such that “those frames will not be subjected to processing that requires high-resolution data.” *Id.* at 3:57–62.

Figure 1, reproduced below, illustrates an exposure environment that is used by an audience measurement system in accordance with the '243 patent. *Id.* at 2:7–9.

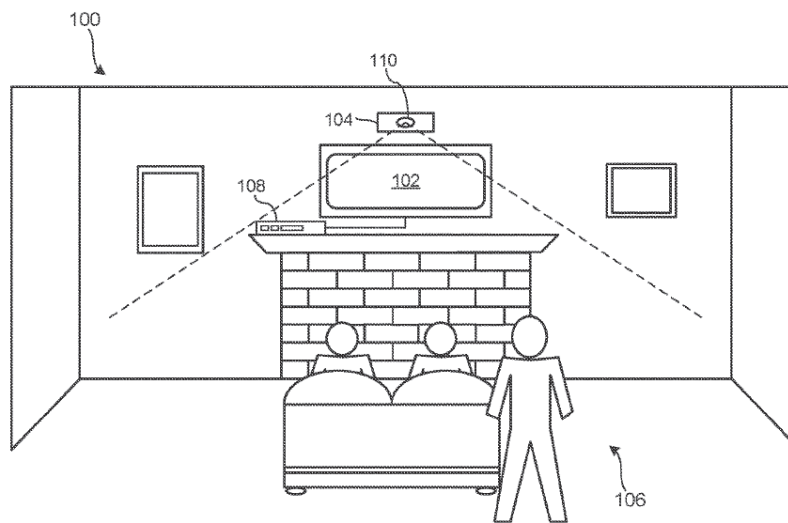


FIG. 1

Figure 1 depicts media exposure environment 100 that includes media presentation device 102, audience measurement device 104, and audience 106. *Id.* at 4:52–56. Media exposure environment 100 “is a room of a household that has been statistically selected to develop television ratings data,” media presentation device 102 is a television that is coupled to a set-top box (STB) 108, and audience measurement device 104 utilizes camera 110 to capture time stamped frames of image data of environment 100. *Id.* 4:56–5:11.

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Figure 2, reproduced below, is a block diagram that shows implementation of the audience measurement device in accordance with the '243 patent. *Id.* at 2:10–11.

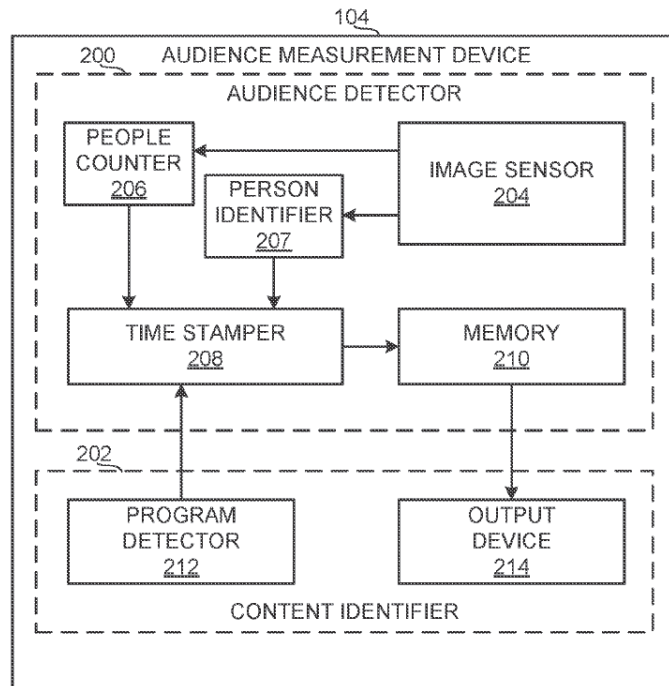
**FIG. 2**

Figure 2 depicts audience measurement device 104 which includes audience detector 200 and content identifier 202. *Id.* at 5:29–33. Audience detector 200 includes image sensor 204, people counter 206, person identifier 207, time stamper 208, and memory 210. *Id.* at 5:33–35. Image sensor 204 captures frames of image data of media exposure environment 100 from Figure 1 that are then conveyed to people counter 206, which can recognize a general shape of a human body. *Id.* at 5:35–6:2. Some frames are conveyed to person identifier 207 for a facial recognition procedure. *Id.* at 6:3–44. People counter 206 and person identifier 207 output calculated tallies or frames to time stamper 208, and together with clock and calendar data, are stored in memory 210. *Id.* at 6:45–67. Content identifier 202

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includes program detector 212 and output device 214. *Id.* at 7:1–2. Program detector 212 detects and collects the presentation of media content from STB 108 of Figure 1 and output device 214 exports recorded data received from memory 210 to a data collection facility, via a network, for further data analysis. *Id.* at 7:2–8:6. Program detector 212 “can collect a signature representative of a portion of the media content” such as “a frequency spectrum of an audio signal” that “can be compared against a collection of signatures of known media content to identify the corresponding media content.” *Id.* at 7:29–34. Identification information of the media content is time stamped by time stamper 208 and is then stored in memory 210. *Id.* at 7:38–41.

The '243 patent discloses that in a second mode or a minority mode, image sensor 204 obtains high-resolution image data of frames that are used for a facial recognition process. *Id.* at 8:55–60. However, in a first mode or a majority mode, frames are designated by resolution determiner 300 from image sensor 204 which are captured while illuminator 306 of image sensor 204 is inactive in which “the contrast level is likely to be too low for proper analysis” by people counter 206. *Id.* at 10:58–67, Fig. 3. Consequently, resolution determiner 300 routes low-contrast frames to pixel binner 312. *Id.* at 10:67–11:4, Fig. 3. Pixel binner 312 thereafter “enhances the dark, low-contrast images generated in the majority mode for processing that does not require high-resolution image data” for the people counting process by people counter 206.” *Id.* at 11:19–29, Fig. 3. The '243 patent also discloses that image sensor 204 includes image capturer 308 that conveys frames captured in the minority mode for storage in frame cache 303 that “are used by the example hi-res trigger 302 to identify heads and/or faces in the

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environment that, due to their orientation, may be identifiable by the person identifier 207.” *Id.* at 10:31–38, Fig. 3; *see also id.* at 9:18–22.

### *E. Challenged Claims*

Petitioner challenges claims 4–6, 8, 11–14, and 18–20 of the ’243 patent.<sup>4</sup> Pet. 3. Disclaimed claim 1 from which challenged claims 4–6 and 8, directly or indirectly, depend, and disclaimed claim 9 from which challenged claims 11–14, directly or indirectly, depend, are independent system claims. Disclaimed claim 16 from which challenged claims 18–20, directly or indirectly, depend is an independent method claim. Ex. 1001, 15:13–42, 16:21–43, 17:15–36; Pet. 3; Prelim. Resp. 1–2. Claims 1 and 4 recite:

1. An audience measurement system to obtain exposure data for a media exposure environment,  
the audience measurement system comprising:  
memory;  
machine readable instructions; and  
processor circuitry to execute the machine readable instructions to:  
generate an audio signature of media content presented by a television within the media exposure environment;  
obtain content identifying data corresponding to the presented media content, the content identifying data based on the audio signature of the media content presented by the television within the media exposure environment;

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<sup>4</sup> The ’234 patent as issued had 29 claims. Ex. 1001, 15:13–19:7. Petitioner does not challenge claims 2, 3, 7, 10, 15, 17, and 21–29 of the ’234 patent. *See, e.g.*, Pet. 3. As indicated above, Patent Owner filed a statutory disclaimer for independent claims 1, 9, and 16 of the ’243 patent. *See* Ex. 2002.

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analyze a sequence of images of the media exposure environment to detect a head appearing in one or more of the images, the sequence of images obtained by a camera while the media content corresponding to the content identifying data is presented by the television; determine an orientation of the head with respect to the camera; and determine audience identification information based on a match of the head to a known person associated with the media exposure environment; and network interface circuitry to output a signal indicative of the content identifying data and the audience identification information to a data collection facility.

4. The audience measurement system of claim 1, wherein the processor circuitry is to:
  - reduce a resolution of a first image of the one or more of the images of the media exposure environment to obtain a reduced-resolution image, and
  - determine the orientation of the head with respect to the camera based on the reduced-resolution image.

*Id.* at 15:13–42, 15:54–60.

#### *E. The Asserted Grounds*

In the Petition (and prior to the filing of the statutory disclaimer of claims 1, 9, and 16), Petitioner challenges claims 1, 4–6, 8, 9, 11–14, 16, and 18–20 of the '243 patent based on the grounds set forth in the table below.

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Claims Challenged	35 U.S.C. §	Reference(s)/Basis <sup>5</sup>
1, 4–6, 8, 9, 11, 14, 16, 18–20	103 <sup>6</sup>	Lu-577, <sup>7</sup> Tian <sup>8</sup>
1, 9, 16	103	Nielsen-372, <sup>9</sup> Steinberg <sup>10</sup>
1, 4–6, 8, 9, 11, 14, 16, 18–20	103	Nielsen-372, Steinberg, Tian

Pet. 3. We note that the second ground is entirely moot and portions of the first and third grounds are moot because they are directed to disclaimed claims 1, 9, and 16. *See supra* Section I.B.

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<sup>5</sup> Petitioner contends that the cited art qualifies as prior art under applicable law. *See* Pet. 4–6. Patent Owner does not dispute the prior art status of the cited art. *See generally* Prelim. Resp. Pursuant to our independent analysis as set forth in this decision, we determine preliminarily that the cited art qualifies as prior art.

<sup>6</sup> The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. § 103, was effective on March 16, 2013. The application for the ’243 patent was filed on May 23, 2022, and claims priority via a series of continuation applications to the filing date of a nonprovisional application filed on Dec. 15, 2011. Ex. 1001, codes (22), (63), 1:6–32. Because the date of the priority claim is before the effective date of the applicable AIA amendment, the pre-AIA version of § 103 applies for purposes of institution.

<sup>7</sup> US 2002/0059577 A1, published May 16, 2002; filed July 19, 2001 (Ex. 1004).

<sup>8</sup> Ying-li Tian, *Evaluation of Face Resolution for Expression Analysis*, 2004 IEEE Computer Society Conference on Computer Vision and Pattern Recognition Workshops, Washington, DC, USA, 2004 (Ex. 1005).

<sup>9</sup> US 2010/0274372 A1, published Oct. 28, 2010; filed July 7, 2010; continuation of application No. 11/576,328, filed Mar. 29, 2007, filed as application No. PCT/US2006/031960, filed Aug. 16, 2006 (Ex. 1006).

<sup>10</sup> US 2010/0066822 A1, published Mar. 18, 2010; filed Sept. 4, 2009 (Ex. 1007).



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Petitioner supports its showing of unpatentability of the challenged claims of the '243 patent with the Declaration of David Scott Doermann, Ph.D. (Ex. 1003). Patent Owner relies on the Declaration of Eli Saber, Ph.D. (Ex. 2001). *See, e.g.*, Prelim. Resp. 1–2.

## II. OBVIOUSNESS ANALYSIS

### A. Principles of Law

Under 35 U.S.C. § 103(a), “[a] patent claim is unpatentable if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007) (similar language). “[W]hen a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *KSR*, 550 U.S. at 416 (citing *United States v. Adams*, 383 U.S. 39, 50–51 (1966)). The question of obviousness involves resolving underlying factual determinations including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and when presented (4) objective evidence of non-obviousness (not presented here). *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). Further, “there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *See KSR*, 550 U.S. at 418.

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*B. Level of Ordinary Skill in the Art*

Petitioner contends that

[a] POSITA [(Person of Ordinary Skill in The Art)] would have been a person with a bachelor's degree in computer science, electrical engineering, or a similar field with at least two years of experience in media analysis or a person with a master's degree in computer science, electrical engineering, or a similar field with a specialization in media analysis. . . . A person with less education but more relevant practical experience may also meet this standard. . . . A POSITA in 2011 would have known or been able to implement systems that collect and analyze audio and image data, techniques for audio feature extraction and identification, techniques for image processing (e.g., resolution adjustment), and face or head analysis techniques.

Pet. 7 (citing Ex. 1003 ¶¶ 46–49). Patent Owner does not dispute Petitioner's assessment of the level of ordinary skill. *See generally* Prelim. Resp.

Determining the level of ordinary skill in the art involves various factors, including the “type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995) (citation omitted). The prior art of record also reflects the level of ordinary skill in the art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). For purposes of this Institution Decision, we adopt the assessment offered by Petitioner, as it is not disputed by the Patent Owner and is consistent with the '243 patent and the asserted prior art.<sup>11</sup>

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<sup>11</sup> No matter how designated in this Decision, any determination (except our decision to institute trial) is preliminary and non-binding. We wish to have

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### C. Claim Construction

In *inter partes* reviews, the Board construes claims using the same claim construction standard employed in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b) (2023). The “words of a claim ‘are generally given their ordinary and customary meaning,’” as would have been understood by a person of ordinary skill in the art at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). “In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence.” *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

Petitioner contends that a person of ordinary skill in the art “would have understood the meaning of ‘media exposure environment’ to at least encompass a space in which a television is located.” Pet. 8 (citing Ex. 1001, 1:56–2:3, 2:25–41, 4:15–5:8, 15:13–17:61, Fig. 1; Ex. 1003 ¶¶ 51–52). Patent Owner does not dispute Petitioner’s definition for this claim term. *See generally* Prelim. Resp.

At this stage, no need exists to expressly construe any claim terms to resolve the parties’ disputes.<sup>12</sup> *See Nidec Motor Corp. v. Zhongshan Broad*

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the full record as developed during trial before rendering any binding determination, finding, or conclusion.

<sup>12</sup> If either party contends that explicit claim construction is necessary in order to make a final determination whether or not any challenged claim is unpatentable based on the arguments and evidence presented, it should

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*Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

*D. Asserted Obviousness of Claims 4–6, 8, 11–14, and 18–20 Based on Lu-577 and Tian*

Petitioner challenges claims 4–6, 8, 11–14, and 18–20 as being obvious over Lu-577 and Tian. *See* Pet. 8–43. We start with a description of the disclosures of Lu-577 and Tian and then consider the arguments and evidence presented by the parties relating to the limitations of claims 4–6, 8, 11–14, and 18–20.

*1. Lu-577 (Ex. 1004)*

Lu-577 is titled, “Audience Measurement System for Digital Television.” Ex. 1004, code (54). The audience measurement system measures viewing of a television program viewed on digital television located in a statistically selected site by (i) retrieving an audience measurement data packet from a television set in order to identify the television program, (ii) detecting an audio code embedded in the television program in order to identify the television program, (iii) extracting an audio signature from the television program in order to identify the television program, (iv) identifying the television program through use of a software agent, and (v) selecting at least one of the retrieving means, the detecting means, the extracting means, and the software agent in order to identify the television program.

*Id.*, code (57). Figure 2 of Lu-577 is reproduced below.

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clearly explain why during trial and provide a clear and unambiguous construction with supporting evidence including specifically identifying the challenges, claims, and limitations to which the construction is necessary.

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Figure 2

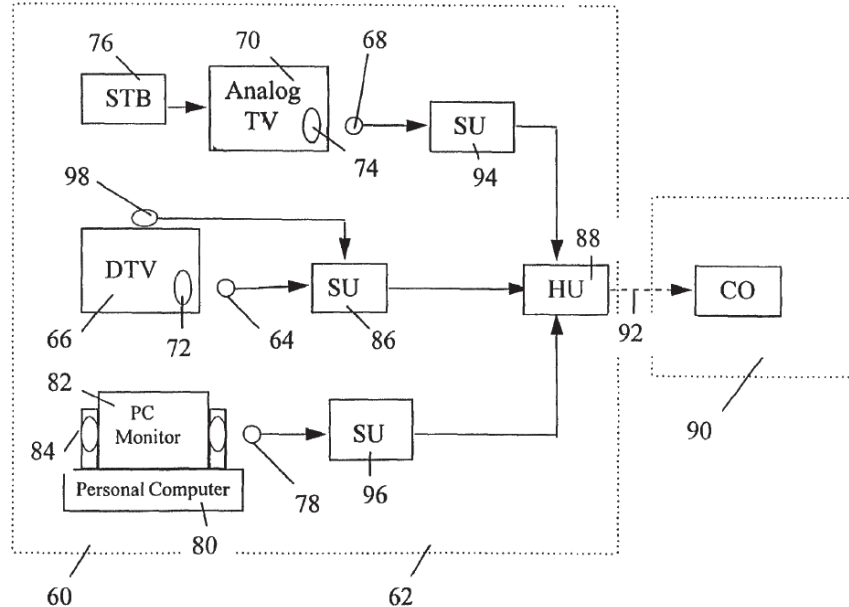


Figure 2 is a schematic block diagram depicting an audio-based tuning measurement system usable with digital or analog broadcasting in accordance to Lu-577. *Id.* ¶ 23. Lu-577 discloses that

a person identifier 98 may be provided in order to identify the persons watching television programming on the digital television set 66. The person identifier 98 may be [a] video camera, an IR camera, or the like. When such equipment is available in the statistically selected monitoring site 62, the site unit 86 may employ known head location and face recognition software (e.g., as taught by Lu in U.S. Pat. No. 4,858,000) for the identification of the viewing persons and for the collection of other demographic data. Similarly, person identifiers may be provided in order to identify the persons watching television programming on the analog television set 70 and on the personal computer 80.

*Id.* ¶ 39.

Lu-577 was filed on July 19, 2001, and was published on May 16, 2002. Ex. 1004, codes (22), (43). The earliest priority date claimed for the

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'243 patent is December 15, 2011. Ex. 1001, code (63), 1:6–32. Lu-577 is prior art to the '243 patent.

## 2. *Tian (Ex. 1005)*

Tian is titled, “Evaluation of Face Resolution for Expression Analysis.” Ex. 1005, 1.<sup>13</sup> Tian is an article from a journal published by The Institute of Electrical and Electronics Engineers (“IEEE”). *Id.* Tian discloses:

Most automatic facial expression analysis (AFEA) systems attempt to recognize facial expressions from data collected in a highly controlled environment with very high resolution frontal faces (face regions greater than 200 x 200 pixels). However, in real environments, the face image is often in lower resolution and with head motion. It is unclear [as to] the performance of AFEA systems for low resolution face images. The general approach to AFEA consists of 3 steps: face acquisition, facial feature extraction, and facial expression recognition. This paper explores the effects of different image resolutions for each step of facial expression analysis. The different approaches are compared for face detection, face data extraction and expression recognition. A total of five different resolutions of the head region are studied (288x384, 144x192, 72x96, 36x48, and 18Xx24 [sic]) based on a widely used public database. The lower resolution images are down-sampled from the originals.

*Id.* at 1 (Abstract) (italics and citation omitted). According to Tian, “[i]n order to handle large head motion, head finding, head tracking and pose estimation can be applied to a facial expression analysis system.” *Id.* (“1. Introduction”); *see also id.* at 2 (“2.1 Face Acquisition”), 3 (“Geometric Feature Extraction (1) Feature Tracking”). Tian discloses that “[o]ur empirical studies illustrated [the] following conclusions: (1) Head detection

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<sup>13</sup> The pages of Tian are not numbered. We refer to the page numbers applied by Petitioner and appearing in the lower, right corner of each page of Exhibit 1005 (without the preceding five zeroes).

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and head pose estimation can detect faces in lower resolution than face detectors. (2) Appearance feature extraction needs face alignment. (3) There is no difference in the recognition of expression analysis when the head region resolution is 72x96 or higher.” *Id.* at 6 (“Conclusion and Discussion”).

Petitioner presents a declaration from an IEEE Director that states that Tian was published and made available no later than July 2, 2004. Ex. 1028; *see also* Pet. 5 (“Tian was published by IEEE and publicly available no later than July 2004.”). On its face, Tian states, “Proceedings of the 2004 IEEE Computer Society Conference on Computer Vision and Pattern Recognition (CVPRW’04).” Ex. 1005 (footer on every page). Patent Owner does not dispute this evidence. *See generally* Prelim. Resp. The earliest priority date claimed for the ’243 patent is December 15, 2011. Ex. 1001, code (63), 1:6–32. Tian is prior art to the ’243 patent.

### 3. *Analysis of Claims 4, 11, and 18*

The Petition provides an element-by-element analysis to show that the limitations recited in dependent claims 4, 11, and 18, including the limitations recited in disclaimed independent claims 1, 9, and 16 that are incorporated by nature of the dependency, are taught by the cited art. *See* Pet. 12–27 (claims 1 and 4), 32–37 (claims 9 and 11), 38–42 (claims 16 and 18). Except for the first limitation recited in claims 4, 11, and 18 directed to reducing the resolution of an image that is discussed below, Patent Owner does not challenge Petitioner’s showing as to any of the limitations recited in claims 1, 4, 9, 11, 16, and 18. *See generally* Prelim. Resp. We have reviewed the showing in the Petition as to these claims and determine that the showing is plainly supported by the cited art and the arguments and other



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evidence relied on in the Petition and, based on the present record, that it is highly likely that Petitioner will prevail as to these claims.

Claims 4, 11, and 18 are similar in that each of these claims includes limitations directed to reducing the resolution of an image and determining the orientation of a head with respect to a camera based on the reduced-resolution image. *See* Ex. 1001, 15:54–60, 16:47–53, 17:40–47. But there are differences in these dependent claims (*see id.*)<sup>14</sup> and in the independent claims (1, 9, and 16) that recite limitations that claims 4, 11, and 18 incorporate based on the dependency (*see id.* at 15:13–42, 16:21–43, 17:15–36). 35 U.S.C. § 112 ¶ 4 (“A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.”). The parties largely ignore these differences and we shall only discuss them as necessary to our analysis of the contentions, arguments, and evidence presented by the parties.

The patentability arguments made by Patent Owner are limited to dependent claims 4, 11, and 18. *See* Prelim. Resp. 2 (“Patent Owner’s

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<sup>14</sup> Challenged claim 4 depends from disclaimed claim 1 and challenged claim 11 depends from disclaimed claim 9. Ex. 1001, 15:53–60 (claim 4), 16:47–53 (claim 11). Method claims 4 and 11 differ in their preambles and in that claim 4 recites “reduce a resolution of a first image of the one or more of the images . . .” whereas claim 11 recites “reduce a resolution of the first image . . .” *Id.* Challenged claim 18 depends from disclaimed claim 16. *Id.* at 17:40–47. Method claim 18 is similar to claims 4 and 11. In place of “reduce a resolution” as recited in claims 4 and 11, claim 18 recites “reducing a resolution of the first image.” In place of “determine the orientation of the head with respect to the camera based on the reduced-resolution image” as recited in claims 4 and 11, claim 18 recites, “wherein the determining the orientation of the head includes determining the orientation of the head with respect to the camera using the reduced-resolution image.”

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arguments of patentability provided herein are for claim 4 (and similarly, claims 11 and 18).”). And, Patent Owner’s arguments are further limited to arguing that “*Tian* does not teach reduc[ing] a resolution of an image of a media exposure environment” (*id.* at 8) and disputing the showing as to motivation to combine the cited references. *Id.* at 10 (“The Petition Fails to Establish a Sufficient Motivation to Combine the References.”) (emphasis omitted). We focus our analysis on claim 4 of the ’243 patent (as do the parties), but our analysis is equally applicable to similar claims 11 and 18.

Dependent claim 4 of the ’243 patent contains two additional limitations beyond the limitations recited in disclaimed independent claim 1. Ex. 1001, 15:53–60 The first additional limitation is “reduce a resolution of a first image of the one or more of the images of the media exposure environment to obtain a reduced-resolution image.” *Id.* at 15:56–58 (referred to herein as “the ‘reduce the resolution’ limitation”). The second additional limitation is “determine the orientation of the head with respect to the camera based on the reduced-resolution image.” *Id.* at 15:59–60 (referred to herein as “the ‘determine the orientation of the head’ limitation”). These limitations relate to the recitation in claim 1 from which claim 4 depends of “[a]n audience measurement system . . . comprising . . . processor circuitry to execute . . . machine readable instructions to . . . analyze a sequence of images of the media exposure environment to detect a head appearing in one or more of the images . . . [and] determine an orientation of the head with respect to the camera.” *Id.* at 15:13–42.

With regard to the “reduce the resolution” limitation, the Petition states:

The combination teaches [this] limitation . . . Ex-1003, ¶¶117-120. *Tian* describes “the effects of different image resolutions”

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for facial analysis. Ex-1005, Abstract; 000002; Ex-1003, ¶118. Tian creates lower-resolution images by down-sampling from original images. Ex-1005, 000002 (“The lower resolution images are down-sampled from the originals.”), Abstract; Ex-1003, ¶119.

Pet. 26.<sup>15</sup> Patent Owner disputes this showing, because Tian states that the lower resolution images used for its analysis were obtained from an available database and Tian, therefore, does not teach circuitry with instructions to reduce the resolution. Prelim. Resp. 8–10. Patent Owner argues:

Petitioner mischaracterizes *Tian*’s teachings in support of the claim that “Tian **creates** lower-resolution images by down-sampling from original images.” *Id.* A POSITA reviewing the context of Petitioner’s carefully selected quotes would not conclude that *Tian* teaches actively creating the reduced-resolution images. *Dec.* ¶¶ 44-48.<sup>[16]</sup>

For example, the caption for Table 1 begins by characterizing the images as “[a]n example in **five different resolutions from Cohn-Kanade database.**” *Tian*, 000002; *Petition*, 26; Ex. 1003, ¶ 119. Neither Petitioner nor their expert makes any attempt to reconcile *Tian*’s statement that the “five different resolutions” are “from [the] Cohn-Kanade database” with the claim requirement to reduce a resolution of a first image.... That is, selecting a previously created, down-sampled image stored in a database is not equivalent to instructions to reduce a resolution of a first image....<sup>[17]</sup>

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<sup>15</sup> With regard to the similar “reduce the resolution” limitations in claims 11 and 18, Petitioner relies on its showing for claim 4. *See* Pet. 36, 42.

<sup>16</sup> Patent Owner’s cites to “Dec.” are to Exhibit 2001, the Declaration of Dr. Eli Saber. *See* Prelim. Resp. 1 n.2.

<sup>17</sup> Although Patent Owner repeatedly states that claims 4, 11, and 18 are similar and the same arguments apply to these three claims (*see* Prelim. Resp. 1, 2, 3, 5, 7, 9, 11, 30), only independent claim 1, from which claim 4 depends, includes a limitation directed to “machine readable *instructions*.”

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*Id.* at 8–9. However, as Petitioner points out, “[Patent Owner] does not dispute that Tian teaches that ‘lower resolution images are down-sampled from the originals’ and that down-sampling is a method of reducing image resolution.” Reply 1. There appears to be no dispute that Tian does disclose a method of reducing the resolution of an image, i.e., down-sampling.<sup>18</sup>

In Petitioner’s proposed combination of the teachings of Lu-577 and Tian, Petitioner relies on Tian’s teaching of “obtaining and analyzing reduced-resolution images and that the accuracy of face detection and head pose estimation can be maintained for reduced-resolution images.” Pet. 10 (citing Ex. 1005 (Tian), Abstract, 2, 5). Patent Owner does not dispute that Tian provides these teachings. *See generally* Prelim. Resp. Petitioner contends that “[a] POSITA would have found it obvious to apply Tian’s teachings to Lu-577’s system to perform facial analysis on reduced-resolution images” because “[d]oing so can reduce the time and resources

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*See* Ex. 1001, 15:16 (emphasis added). Neither independent claim 9, from which claim 11 depends, nor independent claim 16, from which claim 18 depends, include a limitation directed to “instructions.” *See id.* at 16:21–43, 17:15–36.

<sup>18</sup> The Petition also states that “[b]y [the priority date claimed for the ’243 patent], techniques (e.g., subsampling, interpolation) for obtaining reduced-resolution images were widely known.” Pet. 2 (citing Ex. 1003 (Doermann Decl.) ¶ 15). Patent Owner does not challenge this statement. *See generally* Prelim. Resp. The only technique for reducing resolution of an image discussed in the ’243 patent is binning pixels. *See* Ex. 1001, 11:5–36 (“Binning is a process in which a neighborhood of pixels (e.g., a first pixel and a number of adjacent pixels) is summed together . . . to assign more light per orthogonal block of pixels at the cost of lower resolution.”). In paragraph 15 of the Doermann Declaration cited in the Petition, it states that “binning pixels” is among the techniques for obtaining reduced-resolution images that were widely known.

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consumption of tasks such as face detection and pose estimation, without substantially reducing the accuracy of these tasks.” Pet. 10 (citing Ex. 1003 (Doermann Decl.) ¶¶ 68–69.

At least at this preliminary stage of these proceedings, we determine that Petitioner’s showing that the cited art teaches the “reducing the resolution” limitation as recited in claim 4 and similarly recited in claims 11 and 18 to be compelling.<sup>19</sup> Tian plainly teaches obtaining reduced-resolution images and teaches down-sampling as shown in the Petition. *See* Pet. 26.

Petitioner contends that a skilled artisan would have been motivated to combine the relevant teachings of Lu-577 and Tian with a reasonable expectation of success, and the Petition includes the following passages to support this contention:

Lu-577 is in the same field of endeavor as the ’243 patent, which is media analysis. (Pet. 4.)

Tian is in the same field of endeavor as the ’243 patent, which is media analysis. (*Id.* at 5.)

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<sup>19</sup> Herein, we use “compelling” in accordance with the compelling evidence test (“the evidence of record so far in the case would plainly lead to [this] conclusion”) as set forth in the USPTO Memorandum, Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation (“Guidance Memo”), 5 n.6 (June 21, 2022) (available at [https://www.uspto.gov/sites/default/files/documents/interim\\_proc\\_discretionary\\_denials\\_aia\\_parallel\\_district\\_court\\_litigation\\_memo\\_20220621.pdf](https://www.uspto.gov/sites/default/files/documents/interim_proc_discretionary_denials_aia_parallel_district_court_litigation_memo_20220621.pdf)); *see also OpenSky Indus., LLC v. VSLI Tech. LLC*, IPR2021-010164, Paper 102, 49 (PTAB Oct. 4, 2022) (precedential) (“[a] challenge can only ‘plainly lead to a conclusion’ . . . if it is highly likely that the petitioner would prevail”).

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A POSITA would have found it obvious to combine Lu-000<sup>[20]</sup> and Tian because they are similarly directed to image processing and facial analysis, and to use Tian’s techniques to improve Lu-000. (*Id.* at 8 (citing Ex. 1003 ¶ 58).)

Employing the solutions of Tian in Lu-577’s system would have been obvious because Lu-577 explicitly invites employing “known head location and face recognition software.” (*Id.* (citing Ex. 1003 ¶ 59; Ex. 1004 ¶ 39).)

A POSITA would have been motivated to apply Tian’s teaching [of using a video camera, which is capable of taking a sequence of images] because performing facial analysis on a sequence of images can improve the confidence level of person identification and allow the selective performance of face recognition on suitable images (e.g., where a person opens her eyes and faces the camera). (*Id.* at 9 (citing Ex. 1003, ¶ 61; Ex. 1010 ¶ 3; Ex. 1022, 7).)

As suggested by contemporary writings, it would have been obvious to apply Tian’s teaching to Lu-577’s system, such that it determines a face or head location in a first image and use the determined location for subsequent images. . . A POSITA would have been motivated to apply this approach because it saves processing resources and time by reducing the times face detection needs to be applied. (*Id.* (citing Ex. 1003 ¶¶ 63–64; Ex. 1010 ¶ 3).)

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<sup>20</sup> Lu-000 (U.S. Patent No. 4,858,000 (Ex. 1008)) is incorporated by reference into Lu-557 (Ex. 1004) in paragraph 13 (“[I]t is well known in the audience measurement arts to use computer-based image recognition in order to identify members of a viewing audience. Notable among teachings in this area is that by Lu in U.S. Pat. No. 4,858,000.”). Lu-000 is also referenced in paragraph 39 of Lu-577. Ex. 1004 ¶ 39 (“[T]he site unit 86 may employ known head location and face recognition software (e.g., as taught by Lu in U.S. Pat. No. 4,585,000) for the identification of the viewing persons and for the collection of other demographic data.”).



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Tian teaches performing head pose estimation on a subject based on an image. A POSITA would have found it obvious to apply this teaching to Lu-577's system. A POSITA would have found it obvious to determine a person's head pose to determine whether an image is suitable for face recognition and understood that this improves the performance of face recognition. A POSITA would have been further motivated to perform pose estimation to determine whether a person is watching the television, which was known in the art. (*Id.* at 10 (citing Ex. 1003 ¶¶ 65–66; Ex. 1005, 2–3; Ex. 1010 ¶ 3; Ex. 1012 ¶ 39; Ex. 1021, 42).)

Tian teaches obtaining and analyzing reduced-resolution images and that the accuracy of face detection and head pose estimation can be maintained for reduced-resolution images. A POSITA would have found it obvious to apply Tian's teaching to Lu-577's system to perform facial analysis on reduced-resolution images. Doing so can reduce the time and resource consumption of tasks such as face detection and pose estimation, without substantially reducing the accuracy of these tasks. However, it was known that the performance of face recognition may be adversely affected by the reduction of image resolution. A POSITA would have been motivated to perform certain facial analysis techniques (e.g., face detection, head pose estimation) on reduced-resolutions images, while other techniques (e.g., face recognition) on full-quality images. (*Id.* at 10–11 (citing Ex. 1003 ¶¶ 68–70; Ex. 1005, Abstract, 2, 5; Ex. 1013, 1; Ex. 1014, 2:43–53; Ex. 1015, ¶ 22; Ex. 1027, 4–5).)

A POSITA would have found it obvious and been motivated to apply the teachings of Tian to Lu-577 because this is an application of known techniques (e.g., facial analysis techniques) to a known system (e.g., audience measurement system) and method ready for improvement. Doing so would have improved accuracy of face recognition and saved processing resources, and would have yielded predictable results at least because Tian provides experimental assessments of its techniques. (*Id.* at 11 (citing Ex. 1003 ¶ 71).)



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The combination simply uses Tian's teachings about image processing and facial analysis, in the manner taught by Tian, to implement functionalities in Lu-577, which a POSITA would have been more than capable of doing. A POSITA would have had a reasonable expectation of success in combining the references given the overlap between Lu-000 and Tian and because the combination uses well-known techniques that would not have changed the principle of operation for any of the references. (*Id.* (citing Ex. 1003 ¶72).)

A POSITA would have found it obvious that head orientation is determined based on an [sic] reduced-resolution image at least because doing so would have saved processing resources without substantially reducing the accuracy of determination. (*Id.* at 27 (citing Ex. 1003 ¶ 122).)

We determine that Petitioner's showing as to motivation to combine the relevant teachings of Lu-577 and Tian is well-supported, reasonable, and persuasive.

As noted above, Patent Owner disputes Petitioner's showing as to the motivation to combine the relevant teachings of Lu-577 and Tian. *See* Prelim. Resp. 10–45. Patent Owner provides this summary of its arguments relating to motivation to combine:

Each of Petitioner's motivations to combine the references is based either on a flawed alleged improvement or nonexistent problems with the base reference based on Petitioner's declarant misreading the background references. Petitioner's own reference teaches away from Petitioner's proposed modifications. Petitioner's proposed combination would not actually result in any of Petitioner's proposed benefits, and the problems purported to be solved do not actually exist. Rather, Petitioner takes a functional system and uses impermissible hindsight to add in redundant processing steps to the detriment, rather than the benefit, of the system.

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Prelim. Resp. 11. We shall consider these arguments as explained and elaborated on by Patent Owner.<sup>21</sup> *See id.* at 12–45. In summary, for the reasons discussed below, we determine that these arguments are unavailing.

Patent Owner presents arguments regarding motivation to combine Lu-577 and Tian in the context of disclaimed independent claims 1, 9, and 16. *See id.* at 10–11. Patent Owner provides the following explanation for presenting this argument in relation to claims that it has disclaimed:

Although Patent Owner has disclaimed independent claims 1, 9, and 16 to streamline the Board’s analysis, Patent Owner submits that there is no motivation to combine *Tian* with *Lu-577* for claims 1, 9, and 16. Because the remaining Challenged Claims depend, directly or indirectly, from claims 1, 9, and 16, arguments directed to a lack of motivation to combine for the independent claims are similarly applicable to the remaining challenged dependent claims. Additionally, claims 4, 11, and 18 recite further requirements to determine an orientation of the head with respect to the camera recited in the independent claims, namely that the determination is based on the reduced-resolution image. Thus, Patent Owner’s arguments for a lack of motivation to combine apply for both the independent claims and, separately, dependent claims 4, 11, and 18.

*Id.* Despite Patent Owner arguing motivation to combine in the context of disclaimed independent claims 1, 9, and 16, we are considering the patentability of dependent claims 4, 11, and 18 and shall consider all of

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<sup>21</sup> Among the arguments that Patent Owner makes relating to motivation to combine Lu-577 and Tian is that “The Petition’s Generalized Allegations of Obviousness Do Not Provide the Required Articulated, Specific Reasoning.” Pet. 38 (emphasis omitted). As shown above, the Petition contains multiple specific reasons supporting the motivation to combine the relevant teachings of Lu-577 and Tian. We reject this argument.

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Patent Owner’s arguments in the context of the challenged claims of the ‘243 patent.<sup>22</sup>

Patent Owner argues that a skilled artisan would not have combined “determining head orientation, as allegedly taught by Tian” (*see* Pet. 22–23, 27) into the system disclosed in Lu-577, because Lu-000, which is incorporated by reference into Lu-577, uses a “brute force method of facial recognition by comparing the captured image signature with **all stored image signatures** to identify the captured image.” Prelim. Resp. 14–17. Patent Owner argues that the combination would not have improved accuracy from determining head orientation as “Lu-000 already performs facial recognition for a variety of head orientations.” *Id.* at 15 (citing Ex. 2001 ¶ 58). But among the reasons provided by Petitioner supporting the combination is that incorporating Tian’s determination of head orientation into Lu-577’s system would have allowed the selective performance of facial recognition on suitable images and saved processing resources and time while improving, or not substantially reducing, the accuracy.<sup>23</sup> Pet. 9–11, 27. Patent Owner does not address Petitioner’s contentions regarding the additional benefits or motivations of saving processing resources and time. Petitioner’s contentions are well-supported and reasonable. We determine that Petitioner’s position is more persuasive than Patent Owner’s position at this stage.

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<sup>22</sup> And, as discussed above, Patent Owner does not dispute the Petitioner’s showing with regard to any limitation other than the “reduce the resolution” limitations of dependent claims 4, 11, and 18. *See generally* Prelim. Resp.

<sup>23</sup> It is not necessary to show that modification is “the *best* option, only that it be a *suitable* option.” *Par Pharm., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1198 (Fed. Cir. 2014).

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Similarly, Patent Owner argues that modifying Lu-000 to include Tian's head orientation analysis would add an additional step to Lu-000's facial recognition process without any commensurate benefit. Prelim. Resp. 17–18. But Petitioner reasons that a skilled artisan would have recognized multiple benefits including improving accuracy, allowing selective performance of facial recognition on suitable images and saving processing resources and time and would thus be motivated to make the combination. *See* Pet. 9–11, 27. Here again, we find Petitioner's position to be more persuasive than Patent Owner's position.

Patent Owner also argues that because “[i]n Petitioner's proposed modification, before facial recognition is performed, images are pre-filtered based on head orientation as allegedly taught by *Tian*,” “modifying *Lu-000*'s facial recognition process as Petitioner proposes would needlessly skip facial recognition opportunities where facial recognition might succeed.” Prelim. Resp. 18. Patent Owner contends that “this pre-filtering step reduces the frequency of successful facial recognition” and, thus, “would decrease the performance of the facial recognition.” *Id.* (citing Ex. 2001 ¶¶ 66–69) (emphasis omitted). At this juncture, we find more persuasive Petitioner's argument that a skilled artisan would recognize multiple benefits from only performing facial recognition on images in which the head is orientated towards the camera (*see* Pet. 10–11, 27) and would, therefore, have been motivated to make the combination Petitioner proposes.

In specific regard to claims 4, 11, and 18, Patent Owner asserts that “Petitioner's arguments are directed to why there is a motivation to perform **face detection** on a reduced-resolution image rather than the claimed **head orientation determination** on a reduced-resolution image. Therefore,

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Petitioner’s arguments do not respond to the actual claim language.” Prelim. Resp. 29–30. Patent Owner focuses on the additional limitations specifically recited in claims 4, 11, and 18, but this is unwarranted because these dependent claims incorporate the limitations of the independent claims from which they depend (*see* 35 U.S.C. § 112 ¶ 4) and thus include limitations that are specifically directed to face detection. Claim 1 of the ’243 patent recites, “determine audience identification information based on a match of the head to a known person associated with the media exposure environment.” Ex. 1001, 15:37–39. As disclosed in the ’243 patent, a “person identifier” performs “a facial recognition procedure” in order to collect and analyze “a detected human face.” *See id.* at 6:3–44. Independent claims 9 and 16, from which claims 11 and 18 depend, recite similar limitations. *Id.* at 16:21–43, 17:15–39.

And, while claim 4 is directed to “determining the orientation of the head . . . based on the reduced-resolution,” challenged claim 5 that depends from claim 4 is directed to “generating a facial signature from a region of a second image . . . corresponding to a location of the head in the reduced-resolution image.” *Id.* at 15:53–67. And still further, challenged claim 6 that depends from claim 4 recites:

- identify a region corresponding to the head within the first image from which the reduced-resolution image was obtained;
- analyze a portion corresponding to the identified region of a second image; and
- based on the analysis of the region of the second image, determine that the head matches the known person.

*Id.* at 16:1–9. Challenged claims 5 and 6, as well as claims 1 and 4, are specifically directed to performing face detection and analysis in addition to

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head orientation determination. Patent Owner makes unwarranted assertions based on the challenged claims being limited to head orientation determinations as opposed to head detection and facial recognition. We find nothing in Petitioner’s arguments that is inconsistent with the language of claim 4 of the ’243 patent.

Patent Owner additionally argues that “*Tian* teaches away from the combination because *Tian* teaches reduced-resolution images are **undesirable** in the context of expression analysis.” Prelim. Resp. 31; *see also id.* at 36–38. A reference teaches away from a claimed invention if it “criticizes, discredits, or otherwise discourages” modifying a reference to arrive at the claimed invention. *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004). Patent Owner argues that, “[a] POSITA reading *Tian* would be led away from unnecessarily increasing the difficulty of the facial analysis process by intentionally reducing the resolution of an image prior to processing” (Prelim. Resp. 36) and “even though *Tian* explores techniques for ameliorating the difficulties of working with low-resolution images when necessary, a POSITA would be nonetheless discouraged from unnecessarily lowering the resolution and thereby intentionally increasing the difficulty of the facial analysis process” (*id.* at 37). This argument is unavailing as it is based on a misunderstanding of the combination of teachings that Petitioner proposes. As shown above, Petitioner proposes using *Tian*’s teachings relating to reduced-resolution images to detect faces and determine head orientation, but not for facial recognition. *See* Pet. 10–11 (“A POSITA would have been motivated to perform certain facial analysis techniques (e.g., face detection, head pose estimation) on reduced-resolutions images, while other techniques (e.g., face recognition) on full-quality images.”), 27

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(“A POSITA would have found it obvious to apply Tian’s teaching such that Lu-577’s system reduces the resolution of a first image of the one or more of the images and performs face detection or head pose estimation on the reduced-resolution image.”). Patent Owner has identified nothing in Tian that constitutes a teaching away from the proposed combination of teachings or the claimed invention (i.e., criticizing, discrediting, or otherwise discouraging using reduced-resolution images for facial detection and head orientation determination) and we reject this argument.

Patent Owner argues that “Petitioner’s Motivations to Combine Are Indicative of Hindsight.” Prelim. Resp. 40 (emphasis omitted). In support of this argument, the Preliminary Response states:

[A] POSITA **would not**, in fact, have been motivated to modify *Lu-000* to determine a head orientation at all, much less based on reduced resolution images. *Dec.* ¶ 129. *Lu-000* already successfully performs face recognition by comparing the captured image to all stored signatures of various poses. *Lu-000*, 7:52-55, 8:36-45; *Dec.* ¶ 129. Thus, Petitioner’s proposed modification is superfluous and would add complexity to *Lu-000*’s recognition system without providing any benefit. *Id.*

*Id.* Here again, we find more persuasive Petitioner’s showing that a skilled artisan would recognize multiple benefits including improving accuracy, allowing selective performance of facial recognition on suitable images and saving processing resources and time and would thus be motivated to make the combination. *See* Pet. 9–11, 27.

Patent Owner argues that the Petition is deficient because it relies on teachings of *Lu-000* and *Lert*<sup>24</sup> that are incorporated by reference into *Lu-*

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<sup>24</sup> U.S. Patent No. 4,677,466 (Ex. 1009). *Lert* is incorporated by reference into the “Background of the Invention” section of *Lu-577* (Ex. 1004) in



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577 without providing any additional motivation to combine these teachings. Prelim. Resp. 41–43. Patent Owner contends that “combining features from a reference that is incorporated by reference is akin to combining two embodiments of a single reference” for which the case law “require[s] a motivation to combine two (or more) embodiments of a reference.” *Id.* at 41–42. However, Patent Owner’s argument is factually and legally deficient. Patent Owner does not establish that Petitioner relies on two or more embodiments in Lu-577 through the reliance on Lu-577’s incorporation by reference of teachings from Lu-000 and Lert. In the sections of the Petition (Pet. 15–16, 18–21, 23–25) cited in the Preliminary Response (Prelim. Resp. 42–43), Lu-577’s incorporation by reference of Lu-000 and Lert is not at all akin to combining two embodiments. In the Petition, the cited passages in Lu-577 are to the general description of the disclosed invention in the Abstract (Ex. 1004, code (57)), “Background of the Invention” (*id.* at ¶¶ 2–13) and “Summary of the Invention” (*id.* at ¶¶ 14–20) or to the first embodiment (*id.* at ¶¶ 35–44) (depicted in cited Figure 2).<sup>25</sup> As the relied upon teachings in Lu-000 and Lert appear to have

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paragraph 3 (incorporating Lert’s teaching of an approach of measuring usage of electronic entertainment equipment by extracting a characteristic feature signature and comparing it with corresponding reference signatures from known broadcasting sources).

<sup>25</sup> In these passages in the Petition, there is one citation to the second embodiment of Lu-577 that is accompanied by a cite to the first embodiment. *See* Pet. 25 (citing Ex. 1004 ¶¶ 37, 50). Both citations relate to Petitioner’s showing with regard to the last limitation of claim 1 that recites, “network interface circuitry to output a signal indicative of the content identifying data and the audience identification information to a data collection facility.” Patent Owner has disclaimed claim 1 and does not dispute Petitioner’s showing for this limitation. *See generally* Prelim. Resp. In addition, with regard to combining the two embodiments in Lu-577, the

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been properly incorporated by reference into Lu-577, these three references should be treated as one. *Virnetx Inc. v Apple Inc.*, No. 2022-1523, slip op. at 7 (Fed. Cir. Oct. 20, 2023) (citing *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 200) (material in a second document is considered incorporated by reference in a host document if the context “makes clear that the material is effectively part of the host document as it were explicitly contained therein”) and *Callaway Golf Co. v. Acushnet Co.*, 576 F.3d 1331, 1346 (Fed. Cir. 2019) (incorporation by reference requires that the host document “contain language clearly identifying the subject matter which is incorporated and where it is to be found”) (cleaned up). Thus, the relied-upon teachings from Lu-000 and Lert are supported by citations to the general description of the invention in Lu-577 or from a single embodiment. Patent Owner cites cases supporting the proposition that a motivation to combine must be shown for combining the

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Petition states, “[t]he embodiments of Lu-577’s Figures 2 and 3 are compatible with each other and intended to be applied together.” Pet. 12 n.3 (citing Ex-1003 (Doermann Decl.) ¶ 77. The cited paragraph in the Doermann Declaration provides:

Lu-577 includes a first embodiment corresponding to Figure 2 and a second embodiment corresponding to Figure 3 both directed to its television audience measurement system. Lu-577 states that “this second embodiment 100 may include some or all of the features of the first embodiment 60.” Ex-1004, ¶0044. In other words, Lu-577 contemplates the use of all the features of the two embodiments together. In light of this teaching, a POSITA would have found it obvious, for example, for the software agents of the second embodiment to implement some or all of the functionalities of the first embodiment. Ex-1004, ¶0046. The first and second embodiments are compatible with each other and intended to be applied together.

Ex. 1003, 42 n.1.

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teachings of multiple embodiments of a single reference. *See* Prelim. Resp. 41–42. None of the cases cited by Patent Owner establish that a motivation to combine is required under the circumstances presented here. This argument is not supported.

And, finally, Patent Owner argues that “[t]he Petition Fails to Establish a Reasonable Expectation of Success in the Proposed Combination.” Prelim. Resp. 43 (emphasis removed from section heading). The Preliminary Response states, “Petitioner fails to address how each modification of *Lu-577* with *Tian* would have had a reasonable expectation of success. For example, Petitioner ‘fails to explain how, specifically, to implement the modification’ of applying ***Tian*’s head pose classification** ‘with any expectation of success.’” *Id.* With regard to the reasonable expectation of success in combining the relevant teachings of *Lu-577* and *Tian*, the Petition states:

The combination simply uses *Tian*’s teachings about image processing and facial analysis, in the manner taught by *Tian*, to implement functionalities in *Lu-577*, which a POSITA would have been more than capable of doing. *See supra* §I. A POSITA would have had a reasonable expectation of success in combining the references given the overlap between *Lu-000* and *Tian* and because the combination uses well-known techniques that would not have changed the principle of operation for any of the references. Ex-1003, ¶72.

Pet. 11. Patent Owner fails to support its argument by explaining how or why these allegations in the Petition are inaccurate or how or why a skilled artisan would have experienced any difficulty in combining the relevant teachings of *Lu-577* and *Tian*. Based on this record, we find Patent Owner’s argument to be unavailing and Petitioner’s contentions as to the reasonable expectation of success to be persuasive.

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We have considered all the arguments and evidence presented by the parties on the issue of whether a skilled artisan would have been motivated to combine the relevant teachings of Lu-577 and Tian. We determine that Petitioner has articulated compelling reasoning which supports its position on motivation to combine Lu-577 and Tian as proposed by Petitioner with regard to challenged claims 4, 11, and 18. We find Patent Owner's arguments to be less convincing and unavailing.

*4. Summary as to Claims 4, 11, and 18*

We have considered all the arguments and evidence presented by the parties with regard to claims 4, 11, and 18. Petitioner has shown that the cited combination of Lu-577 and Tian teaches all the limitations of claims 4, 11, and 18, and has articulated well-supported reasoning as to why a skilled artisan would have been motivated to combine these teachings as set forth in claims 4, 11, and 18. In contrast, Patent Owner's arguments to the contrary are not supported or convincing. We determine that, based on the present record, Petitioner's showing is compelling as Petitioner is highly likely to prevail in establishing the obviousness of claims 4, 11, and 18 in view of Lu-577 and Tian.<sup>26</sup>

*5. Analysis of Claims 5, 6, 8, 12–14, 19, and 20*

Petitioner challenges claims 5, 6, 8, 12–14, 19, and 20 based upon a combination of the teaching of Lu-577 and Tian. Pet. 3, 27–31, 37–38, 42–

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<sup>26</sup> Accordingly, we institute *inter partes* review as to all the challenged claims (except for the disclaimed claims (*see* 37 C.F.R. § 42.107(e))) and all the challenges raised in the Petition (to the extent not mooted by the disclaimer). 37 C.F.R. § 42.108(a) (“When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”).

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43. Petitioner provides an element-by-element analysis showing that the additional limitations recited in these dependent claims are taught by the cited art. *See id.* At this juncture, Patent Owner does not provide any arguments relating specifically to the challenges to these claims. *See generally* Prelim. Resp. For the reasons discussed above in relation to claims 4, 11, and 18, we determine that, based on the present record, Petitioner’s showing is compelling as Petitioner is highly likely to prevail in establishing the obviousness of claims 5, 6, 8, 12–14, 19 and 20 in view of Lu-577 and Tian.

*E. Asserted Obviousness of Claims 4–6, 8, 11–14, and 18–20 Based on Nielsen-372, Steinberg, and Tian*

Petitioner also challenges claims 4–6, 8, 11–14, and 18–20 as being obvious over Nielsen-372, Steinberg, and Tian. *See* Pet. 3, 71–88. We start with a description of the disclosures of Nielsen-372 and Steinberg and then consider the arguments and evidence presented by the parties relating to the challenge to claims 4–6, 8, 11–14, and 18–20 based on this combination of references.

*1. Nielsen-372 (Ex. 1006)*

Nielsen-372 “relates generally to audience measurement.” Ex. 1006 ¶ 2. Figure 1 of Nielsen-372 is reproduced below.

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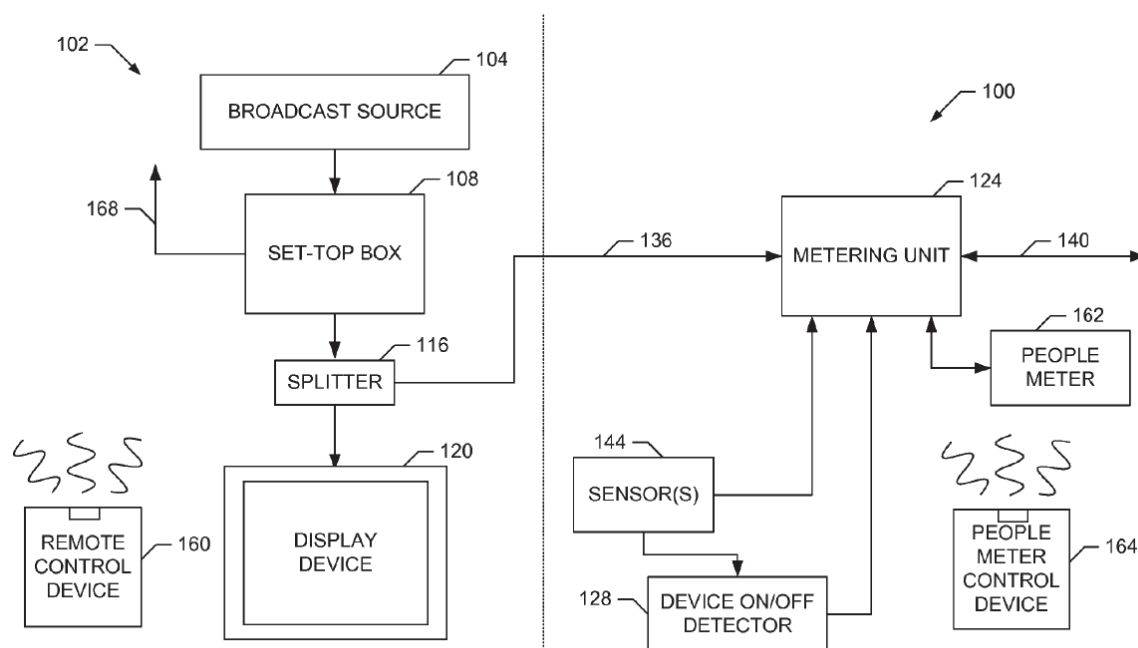


FIG. 1

Figure 1 is a block diagram depicting a local metering system coupled to a home entertainment system. *Id.* ¶ 7. Local metering system 100 provides viewing and metering information for program content presented via home entertainment system 102. *Id.* ¶ 36. Home entertainment system 102 includes broadcast source 104, set-top box (STB) 108, signal splitter 116, and display device 120. *Id.* Local metering system 100 includes metering unit 124 and display device ON/OFF detector 128. *Id.* This configuration “may perform the functions of storing data and forwarding the stored data to a central facility for subsequent processing.” *Id.* The configuration also “performs the functions of collecting viewing/metering data, processing such data (possibly in real-time) and sending the processed data to the single home unit for that home.” *Id.* Program identifying information is determined and viewing records are generated for the program content that is received and output by STB 108. *Id.* ¶ 44. Metering unit 124 and display device ON/OFF detector 128 include one or more sensors 144 such as a

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microphone to receive audio signals corresponding to the program that is being displayed. *Id.* Local metering system 100 also includes people meter 162 for capturing information about the audience by receiving information from people meter control device 164. *Id.* ¶ 48. People meter 162 “may prompt the audience members to indicate that they are present in the viewing audience by pressing the appropriate input key on the people meter control device 164.” *Id.* STB 108 can “determine whether program content being received and output is also being presented by the monitored display device 120.” *Id.* ¶ 49. Device ON/OFF detector is configured to process signals received from sensors 144 which can be an audio sensor, a video sensor, or an emission sensor. *Id.* ¶ 50. The video sensor can be a camera “positioned to detect the display area of the display device 120 or corresponding information presenting device.” *Id.*

Nielsen-372 was filed on July 7, 2010, and was published on October 28, 2010. Ex. 1006, codes (22), (43). Nielsen-372 is a continuation of an application filed on March 29, 2007. *Id.*, code (63). The earliest priority date claimed for the ’243 patent is December 15, 2011. Ex. 1001, code (63), 1:6–32. Nielsen-372 is prior art to the ’243 patent.

## 2. *Steinberg (Ex. 1007)*

Steinberg is titled “Classification and Organization of Consumer Digital Images Using Workflow, and Face Detection and Recognition.” Ex. 1007, code (54). Steinberg discloses that

[a] processor-based system operating according to digitally embedded programming instructions performs a method including identifying a group of pixels corresponding to a face region within digital image data acquired by an image acquisition device. A set of face analysis parameter values is ext[r]acted from said face region, including a faceprint



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associated with the face region. First and second reference face prints are determined for a person using reference images captured respectively in predetermined face-portrait conditions and using ambient conditions. The faceprints are analyzed to determine a baseline faceprint and a range of variability from the baseline associated with the person. Results of the analyzing are stored and used in subsequent recognition of the person in a subsequent image acquired under ambient conditions.

*Id.*, code (57).

Steinberg was filed on September 4, 2009, and was published on March 18, 2010. Ex. 1006, codes (22), (43). The earliest priority date claimed for the '243 patent is December 15, 2011. Ex. 1001, code (63), 1:6–32. Steinberg is prior art to the '243 patent.

### 3. *Analysis of Claims 4–6, 8, 11–14, and 18–20*

Petitioner relies on the combination of Nielsen-372 and Steinberg for teaching all the limitations of disclaimed independent claims 1, 9, and 16. *See* Pet. 3, 43–71. For dependent claims 4–6, 8, 11–14, and 18–20, Petitioner relies on the combination of Nielsen-372, Steinberg, and Tian. *Id.* at 3, 71–88. As with the previously-discussed combination of Lu-577 and Tian (*see* Section II.D.3.), Petitioner relies on Tian for its teachings related to reduced-resolution images and head orientation determination as recited in claims 4, 11, and 18. *See id.* at 3, 71–73 (combining Nielsen-372, Steinberg, and Tian), 75–76 (claim 4), 82–83 (claim 11), 86–87 (claim 18).

Petitioner provides this summary of the teachings of Nielsen-372 that it relies on:

Nielsen-372 teaches a local metering system that includes a metering unit or display device ON/OFF detector that identifies a presented television program and a people meter that identifies the persons viewing the program. Ex-1006,

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¶0003, ¶¶0036-0037, ¶0040, ¶0044, ¶0048, ¶0057. The people meter takes an approach of “prompt[ing] the audience members to indicate that they are present in the viewing audience[.]” Ex-1006, ¶0048; Ex-1003, ¶196.

Pet. 43 (alterations in original). Petitioner also points out that Nielsen-372 discloses hardware recited in the challenged claims. *Id.* at 44 (“Nielsen-372’s system includes needed hardware (e.g., a computer and a camera).”).

Petitioner provides this summary of the teachings of Steinberg that it relies on:

Steinberg is directed to “using face detection and face recognition techniques to identify the persons contained within a digital image[.]” Ex-1007, ¶0090. Steinberg teaches detecting a face and its location in an image, determining a pose or orientation of a face, and identifying a person using face recognition. Ex-1007, ¶0005, ¶0057, ¶0092, ¶0096, ¶0118, ¶0120, ¶¶0126-0128, ¶0130, ¶¶0157-0158, ¶0166, ¶0168, ¶0176; Ex-1003, ¶197.

Pet. 43–44 (alteration in original).

With regard to motivation to combine the relevant teachings of Nielsen-372 and Steinberg with a reasonable expectation of success, the Petition states:

Nielsen-372’s approach of prompting and soliciting manual inputs from the individuals may create a negative audience experience and compromise the accuracy of data. Ex-1006, ¶0048. Applying Steinberg’s method to Nielsen-372 would have allowed identification of the audience members without interruptions to the entertainment experience and with improved accuracy. A POSITA would have been motivated to do so because these benefits are consistent with Nielsen-372’s goal of collecting viewing information. Ex-1003, ¶201.

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A POSITA would have found it obvious and been motivated to apply the teachings of Steinberg to Nielsen-372 because this is a simple substitution of one known element (e.g., audience identification based on facial analysis) for another (e.g., audience identification based on user input) to obtain predictable results. Doing so would have yielded predictable results because the techniques of facial analysis were well known in the 2011 timeframe and applied to television audience measurement. *Supra* §I; Ex-1003, ¶202.

A POSITA would have had a reasonable expectation of success given that Nielsen-372 provide the hardware architecture for performing Steinberg’s method and that Steinberg’s techniques were admittedly known. Ex-1001, 1:67-2:3. The combination simply implements Steinberg’s teachings about facial analysis, in the manner taught by Steinberg, in Nielsen-372’s system. *See supra* §I. The combination would have been nothing more than the use of a known technique to improve similar devices in the same way and would not have changed the principle of operation for any of the references. Ex-1003, ¶203.

Pet. 44–45. We determine that Petitioner’s showing as to motivation to combine the relevant teachings of Nielsen-372 and Steinberg is well-supported, reasonable, and persuasive.

Patent Owner challenges Petitioner’s showing of motivation to combine Nielsen-372 and Steinberg.<sup>27</sup> Prelim. Resp. 50–57. Patent Owner contends that “Petitioner’s combination relies upon the camera of

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<sup>27</sup> Patent Owner presents these arguments in the context of disclaimed independent claims 1, 9, and 16 and Petitioner’s second ground related only to these disclaimed claims. Patent Owner explains this presentation as follows:

As discussed above, Patent Owner has disclaimed independent claims 1, 9, and 16, which are the only claims challenged under Ground 2. Thus, Ground 2 is rendered moot. *See* 37 C.F.R. § 42.107(e) (“No *inter partes* review will be

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*Nielsen-372* to teach the claim limitations of the '243 Patent related to capturing images of the 'media exposure environment' to collect the audience identification information.” Prelim. Resp. 50. This argument is based on a mischaracterization of Petitioner’s showing. Claim 1 recites, “analyze a sequence of images of the media exposure environment to detect a head appearing on one or more of the images, the sequence of images obtained by a *camera* while the media content corresponding to the content identifying data is presented by the television” (Ex. 1001, 15:28–34) (emphasis added); claim 9 recites, “while the media content corresponding to the content identifying data is presented by the television, collect a first image of the media exposure environment by a *camera*” (*id.* at 16:30–33) (emphasis added); and claim 16 recites, “while the media content corresponding to the content identifying data is presented by the television, capturing first and second images of the media exposure environment with a *camera*” (*id.* at 17:22–25) (emphasis added). For each of these limitations in the independent claims that contains the first recitation of “a camera” in the claims and that serves as the antecedent basis for the later references to

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instituted based on disclaimed claims.”). However, as Petitioner’s Ground 3 is largely based on the Ground 2 combination, Patent Owner responds to the arguments as applied to the limitations of the independent claims under the heading of Ground 2 for ease of reference.

Prelim. Resp. 46. As above with regard to the combination of Lu-577 and Tian, despite Patent Owner arguing motivation to combine in the context of disclaimed independent claims 1, 9, and 16, we are considering the patentability of the challenged dependent claims and shall consider all of Patent Owner’s arguments in the context of the challenged dependent claims.

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“the camera” in the claims, Petitioner cites teachings in Steinberg, not Nielsen-372. *See* Pet. 53, 65, 69. In this regard, the Petition states:

Steinberg teaches **obtaining a sequence of images by a camera** (e.g., digital camera, image capture device). Ex-1007, ¶¶0010. Steinberg’s image capture device (e.g., a digital camera) captures images and handles certain image processing operations. Ex-1007, ¶¶0128-0129, FIGs. 1(b)-1(c); Ex-1003, ¶¶227.

*Id.* at 53. Accordingly, we reject this misdirected argument.<sup>28</sup>

Relying heavily on its showing for claims 1, 9, and 16 based on the combination of Nielsen-372 and Steinberg (*see supra*), Petitioner provides an element-by-element showing that the combination of Nielsen-372, Steinberg, and Tang teaches all the limitations of independent claims 1, 9, and 16. Pet. 45–71, 73–75, 80–82, 84–86. Petitioner also provides an element-by-element showing for dependent claims 4–6, 8, 11–14, and 18–20. *Id.* at 75–80, 82–84, 86–88.

With regard to motivation to combine the relevant teachings of Nielsen-372, Steinberg, and Tang with a reasonable expectation of success, the Petition provides:

A POSITA would have found it obvious to add Tian to the combination of Nielsen-372 and Steinberg because Steinberg and Tian are directed to similar functionalities (e.g., images process and facial analysis) and address similar software-based tasks (e.g., identifying a head in an image). (Pet. 71)

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<sup>28</sup> We also note that, in the “Background,” the ’243 patent acknowledges that it is known that “some audience measurement systems . . . capture a series of images of a media exposure environment . . . and analyze the images.” Ex. 1001, 1:56–66 (cited, e.g., at Pet. 56 (discussing limitation reciting “a camera”).

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A POSITA would have been motivated to apply Tian's teaching because performing facial analysis on a sequence of images can improve the confidence level of identification and allow the selective performance of face recognition on suitable images. (*Id.* at 72 (citing Ex. 1003, ¶ 283; Ex. 1010 ¶ 3; Ex. 1022, 7).)

Tian teaches determining a face/head location in a first image and using this location for subsequent images unless a change is detected. . . . Contemporary writings demonstrates that it was obvious to apply Tian's approach to Nielsen-372 and Steinberg. . . . A POSITA would have been motivated to apply this approach because it saves processing resources and time by not repeating face detection for entire images. (*Id.* (citing Ex. 1003 ¶¶ 284–285; Ex. 1005, 1, 3; Ex. 1010 ¶ 3).)

A POSITA would have been motivated to perform certain facial analysis techniques (e.g., face detection, head pose estimation) on reduced-resolutions images, while other techniques (e.g., face recognition) on full-quality images. (*Id.* at 71–72 (citing Ex. 1003 ¶¶ 287–288).)

A POSITA would have found it obvious and been motivated to apply the teachings of Tian to the combination of Nielsen-372 and Steinberg because this is an application of known techniques (e.g., Tian's facial analysis techniques) to a known system (e.g., Nielsen-372's people meter) and method (e.g., Steinberg's facial analysis methods) ready for improvement. . . . Doing so would have improved accuracy of face recognition and provided savings in processing resources and time, and would have yielded predictable results at least because Tian provides experimental assessments of its techniques.

The combination simply uses Tian's teachings about image processing and facial analysis, in the manner taught by Tian, to implement functionality in Nielsen-372. . . . A POSITA would have been motivated and would have had a reasonable expectation of success in combining the references given the overlap between Steinberg and Tian and because the combination uses well-known techniques that would not have

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changed the principle of operation for any of the references. (*Id.* at 73 (citing Ex. 1003 ¶¶ 289–290).)

Tian teaches reducing the resolution of an image to obtain a reduced-resolution image. . . . A POSITA would have found it obvious to apply this teaching to a first image of the media exposure environment. . . . Steinberg’s teachings of processing images of different resolutions would have further motivated a POSITA to apply Tian’s teachings. (*Id.* at 75–76 (citing Ex. 1003 ¶ 311; Ex. 1005, Abstract, 2; Ex. 1007 ¶¶ 141, 142, 196).)

We determine that Petitioner’s showing as to motivation to combine the relevant teachings of Nielsen-372, Steinberg, and Tian is well-supported, reasonable, and persuasive.

Patent Owner does not present any further arguments relating specifically to challenged claims 4–6, 8, 11–14, and 18–20 and the combination of Nielsen-372, Steinberg, and Tian. *See* Prelim. Resp. 57. Instead, Patent Owner relies on its previously-presented arguments. *Id.* In this regard, the Preliminary Response states:

The only difference between the combinations of Grounds 2 and 3 is Petitioner incorporating arguments regarding *Tian* from Ground 1. *Petition*, 71-88. Petitioner relies on the same Ground 2 argument for combining *Nielsen-372* and *Steinberg*. *Petition*, 71. Petitioner recycles the arguments for modifying *Lu-577* with *Tian* into the combination of *Tian* with *Nielsen-372* and *Steinberg*. *Compare Petition*, 8-11 with 71-73. Thus, the obviousness combinations for Ground 3 fail for the same reasons noted for Grounds 1 and 2. *See Section IV-V*.

*Id.* Accordingly, we have already considered Patent Owner’s arguments and found them to be unavailing.



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4. *Summary as to Claims 4–6, 8, 11–14, and 18–20*

We have considered all the arguments and evidence presented by the parties with regard to claims 4–6, 8, 11–14, and 18–20. Petitioner has shown that the combination of Nielsen-372, Steinberg, and Tian teaches all the limitations of claims 4–6, 8, 11–14, and 18–20, and has articulated well-supported reasoning as to why a skilled artisan would have been motivated to combine these teachings as set forth in claims 4–6, 8, 11–14, and 18–20. In contrast, Patent Owner’s arguments to the contrary are relatively weak. We determine that, based on the present record, Petitioner’s showing is compelling as Petitioner is highly likely to prevail in establishing the obviousness of claims 4–6, 8, 11–14, and 18–20 in view of Nielsen-372, Steinberg, and Tian.

III. DISCRETIONARY INSTITUTION, 35 U.S.C. § 314(a)

Institution of an *inter partes* review is discretionary. *See* 35 U.S.C. § 314(a) (authorizing institution of an inter partes review under particular circumstances, but not requiring institution under any circumstances); *Cuozzo Speed Techs., LLC v. Lee*, 579 U.S. 261, 273 (2016) (“[T]he agency’s decision to deny a petition is a matter committed to the Patent Office’s discretion.”); *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1356 (2018) (“[Section] 314(a) invests the Director with discretion on the question whether to institute review . . . .” (emphasis omitted)); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1367 (Fed. Cir. 2016) (“[T]he PTO is permitted, but never compelled, to institute an IPR proceeding.”).

Patent Owner urges the Board to exercise discretion to deny institution of *inter partes* review under § 314(a) based on the factors established in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, 2020 WL 2126495,

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at 2–3 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”). Prelim. Resp. 61–63; Sur-reply 1–5.<sup>29</sup>

An advanced state of a parallel district court proceeding is a “factor that weighs in favor of denying the Petition under § 314(a).” *NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 at 20 (PTAB Sept. 12, 2018) (precedential) (“*NHK*”). Specifically, an early trial date is part of a “balanced assessment of all relevant circumstances in the case, including the merits.” Consolidated Trial Practice Guide November 2019 (“TPG”) 58.<sup>30</sup>

This balanced assessment involves consideration of the following factors:

1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
2. proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision;

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<sup>29</sup> In its Sur-reply, Patent Owner repeatedly argues that we should disregard Petitioner’s arguments opposing discretionary denial in the Reply because they were waived. *See, e.g.*, Sur-reply 1 (“Petitioner’s Reply to Patent Owner’s Preliminary Response (Paper 7, ‘Reply’) introduces new arguments that could have been included in the Petition for *Inter Partes* Review (Paper 2, ‘Petition’) and that should be disregarded as being waived accordingly.”). We reject this argument. Petitioner was not required to anticipate in the Petition all of Patent Owner’s arguments for discretionary denial. *See Vector Flow, Inc. v. HID Global Corporation*, IPR2023-00353, Paper 11 (PTAB Aug. 10, 2023) (Director vacating decision denying institution and ordering filing of a reply to allow petitioner to address discretionary denial arguments in preliminary response.). In this case, the Board specifically authorized Petitioner to file a reply to address the request for discretionary denial by Patent Owner and for Patent Owner to file a sur-reply. Patent Owner was afforded the opportunity to substantively respond to the Reply in the Sur-reply.

<sup>30</sup> Available at <https://www.uspto.gov/TrialPracticeGuideConsolidated>.

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3. investment in the parallel proceeding by the court and the parties;

4. overlap between issues raised in the petition and in the parallel proceeding;

5. whether the petitioner and the defendant in the parallel proceeding are the same party; and

6. other circumstances that impact the Board's exercise of discretion, including the merits.

*Fintiv*, Paper 11 at 5–6.

*Factor 1: whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted*

Neither party contends that the district court case has been stayed or that the district court has been presented with a motion for a stay or otherwise considered a stay. The parties have “consented to Magistrate Judge **Burke** conducting ‘all proceedings’ in the Delaware district court case.” Prelim. Resp. 61 (citing Ex. 2005 (Notice, Consent, and Reference of a Civil Action to a Magistrate Judge)). Petitioner argues that “Judge Burke has a record of staying cases based on IPR institutions.” Reply 2. Patent Owner argues that “Judge Burke does deny Motions to Stay even after institution of IPR.” Sur-reply 2. Given the particular circumstances of this case, we lack sufficient information to determine, at this stage, the likelihood that the district court might grant a motion to stay, should one be requested. *See Sand Revolution II, LLC v. Cont’l Intermodal Group – Trucking LLC*, IPR2019-01393, Paper 24 at 7 (PTAB June 16, 2020) (informative) (“Sand Revolution”); *see also Fintiv*, Paper 15 at 11–12 (“Neither party has requested a stay of the District Court case pending in this proceeding. Thus, the District Court has not ruled on this issue . . . . This factor does not weigh for or against discretionary denial in this case.”). We will not speculate as to

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whether Judge Burke will stay the district court case. Accordingly, we determine that this factor does not weigh either for or against exercising our discretion to deny institution in this case. We consider this factor to be neutral.

*Factor 2: proximity of the court’s trial date to the Board’s projected statutory deadline for a final written decision*

Judge Burke has ordered that trial in the district court will begin on November 3, 2025. Ex. 1029, 18. The final written decision in this matter will be due no later than January 2025. This proceeding will be completed and our decision on patentability will be rendered well before the district court trial commences. This factor weighs heavily against discretionary denial.

*Factor 3: investment in the parallel proceeding by the court and the parties*

“This investment factor is related to the trial date factor, in that more work completed by the parties and court in the parallel proceeding tends to support the arguments that the parallel proceeding is more advanced, a stay may be less likely, and instituting would lead to duplicative costs.” *Fintiv*, Paper 11 at 10. If, at the time of the institution decision, a district court has issued substantive orders related to the challenged patent, such as a claim construction order, this circumstance weighs in favor of denial. *See id.* at 9–10. On the other hand, if the district court has not issued such orders, this circumstance weighs against discretionary denial. *Id.* at 10.

Petitioner contends that “[t]he district court litigation remains in its early stages, and little work has been completed.” Reply 4. Petitioner argues:

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The parties have only exchanged initial invalidity and infringement contentions. Ex-1029, 000004. The final contentions are not due until July 2024. *Id.* The hearing on claim construction is scheduled for March 14, 2024. *Id.* at 000013. In fact, the parties have recently stipulated to extend the time for Nielsen to respond to TVision’s Amended Answer and Counterclaim to November 21, 2023. Ex-1030, 000001. By January 11, 2024, when the Board is expected to issue its decision on institution, the parties and district court would not have invested a large amount of work in the co-pending case.

*Id.*

Patent Owner takes the opposite view. Patent Owner argues:

The Parties have invested significant work in the parallel litigation. Ex. 2006, *Docket Report for Case No. 1:22-cv-01345, District Court of Delaware*. This work includes (1) ongoing discovery in the litigation, including document production and interrogatory requests (Docket Entries 27, 32, 36, 39, 53, 56, 59-61, and 63); (2) exchange of invalidity and infringement contentions (Docket Entries 47 and 51); and (3) exchanged claim constructions on October 6, 2023 (Docket Entries 63 and 65), and claim construction briefing beginning December 11, 2023, with a *Markman* hearing to be held March 14, 2024 (Docket Entry 17).

Prelim. Resp. 61–62.

In the Sur-reply, Patent Owner informs us that “the parties agreed not to propose any claim terms for the court to construe, and the *Markman* hearing has been removed from the Scheduling Order.” Sur-reply 3 (citing Ex. 2013 (Stipulation and Proposed Order Regarding Claim Construction)). Thus, neither party identifies any substantive orders issued in the district court. But, based on the information presented to us, it appears that there has been some investment of time and effort into the district court case by Judge Burke and the parties. The parties are engaging in discovery and have

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exchanged initial invalidity and infringement contentions (the final contentions are due in July 2024). However, further effort remains to be expended before trial in the district court case. Under these circumstances, this factor weighs only marginally in favor of exercising discretion to deny institution. *See Sand Revolution* at 10–11.

*Factor 4: overlap between issues raised in the petition and in the parallel proceeding*

There appears to be much overlap between the issues raised in the Petition and the district court. Patent Owner argues:

Petitioner did not present any stipulation, including a *Sotera* stipulation. *Petition*, 6-7. All of the references mapped in the challenged grounds were cited by [Petitioner] in its Invalidity Contentions. Ex. 2004, *TVision’s Initial Invalidity Contentions Regarding the ’243 Patent*, Exhibit A1-A4. The references cited in the present IPR grounds are the **only** references included in the Initial Invalidity Contentions, creating a **complete overlap between the prior art cited in the parallel litigation and the Petition’s grounds**. *Id.* at Exhibits A1-A4. There is also complete overlap between the challenged and asserted claims.

Prelim. Resp. 62. Petitioner argues that “***Fintiv* Factor 4** weighs against denial because the Board’s [Final Written Decision] will predate trial in the district court.” Reply 4. However, Petitioner’s argument more properly relates to Factor 2 and we have already considered and accorded weight to the relative timing of the final written decision and the trial date. And, as Patent Owner notes, Petitioner has not filed any stipulation and there appears to be complete overlap between the issues raised in the Petition and in the district court. This factor weighs heavily in favor of exercising discretion to deny institution.

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*Factor 5: whether the petitioner and the defendant in the parallel proceeding are the same party*

The parties are the same in the district court and in this proceeding. *See, e.g.*, Prelim. Resp. 63. This factor weighs in favor of exercising our discretion to deny institution.

*Factor 6: other circumstances that impact the Board's exercise of discretion, including the merits*

The factors typically considered in the exercise of discretion are part of a balanced assessment of all the relevant circumstances in the case, including the merits. *Fintiv*, Paper 11 at 14. For example, if the merits of a ground raised in the petition seem particularly strong on the preliminary record, this fact has favored institution. *Id.* at 14–15. By contrast, if the merits of the grounds raised in the petition are a closer call, then that fact has favored denying institution when other factors favoring denial are present. *Id.* at 15.

As noted above in discussing the merits of Petitioner's challenge to the claims of the '243 patent, we determine that Petitioner's challenges are compelling because it is highly likely that the Petitioner will prevail with respect to at least one or more challenged claim. For the reasons discussed *supra*, we determine that the evidence, if unrebutted in trial, would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence. This factor very heavily weighs against exercising our discretion to deny institution.

*Conclusion Regarding Discretionary Denial*

In summary, factor 1 is neutral, factor 2 weighs heavily against denying institution, factor 3 weighs marginally in favor of denying institution, factor 4 weighs heavily in favor of denying institution, factor 5



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weighs in favor of denying institution, and factor 6 weighs very heavily against denying institution. However, the Guidance Memo provides that where the Board “determines that the information presented at the institution stage presents a compelling unpatentability challenge, that determination alone demonstrates that the PTAB should not discretionarily deny institution under *Fintiv*.” Guidance Memo at 4–5; *see Fintiv* at 5–6. And, in *CommScope Techs. v. Dali Wireless, Inc.*, IPR2022-01242, Paper 23 (PTAB Feb. 27, 2023) (precedential), the Director instructed that, even where the analysis of *Fintiv* factors 1–5 favors denial of institution, the Board should not deny institution where there is a showing of unpatentability by compelling merits. As noted above, the Petition in this proceeding meets this high standard.

For these reasons, we decline to exercise our discretion under § 314(a) to deny institution of *inter partes* review.

#### IV. CONCLUSION

For the foregoing reasons, we determine that trial should be instituted on claims 4–6, 8, 11–14, and 18–20 of the ’243 patent.

#### V. ORDER

Upon consideration of the record before us, it is:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review of claims 4–6, 8, 11–14, and 18–20 of U.S. Patent No. 11,470,243 B2 is instituted with respect to first and third grounds set forth in the Petition (*see* Pet. 3); and

FURTHER ORDERED that, pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4(b), *inter partes* review of U.S. Patent No. 11,470,243 B2

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shall commence on the entry date of this Order, and notice is hereby given of the institution of a trial.

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# Exhibit 2

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

THE NIELSEN COMPANY (US), LLC,	)	
	)	
Plaintiff,	)	
	)	C.A. No. 22-1345-CJB
v.	)	
	)	<b>JURY TRIAL DEMANDED</b>
TVISION INSIGHTS, INC.,	)	
	)	
Defendant.	)	

**THE NIELSEN COMPANY (US), LLC'S INITIAL CLAIM CHARTS**

Plaintiff The Nielsen Company (US), LLC ("Nielsen"), by and through its counsel, serves Defendant TVision Insights, Inc. ("TVision") with the following Initial Claim Chart pursuant to Paragraph 6(d) of the Court's Scheduling Order (D.I. 17) and Paragraph 4(c) of the Default Standard for Discovery, Including Discovery of Electronically Stored Information ("Default Standard").

**I. Preliminary Statement**

These Initial Claim Charts are based on information reasonably available to Nielsen at this time. On February 10, 2023, Nielsen provided its Paragraph 4(a) Disclosures accusing

all products, devices, systems or methods TVision makes, has made, licenses, purchases, practices, has practiced, uses, has used, sells, offers for sale, distributes, or imports, that perform audience measurement, including, but not limited to, audience measurement devices TVision provides to households that are to be associated with various household televisions or devices playing media. Nielsen specifically accuses TVision's [REDACTED] system, methods and devices and [REDACTED] system, methods and devices in addition to TVision's other audience measurement devices, systems, and methods.

Nielsen also accused "TVision's servers and systems that collect and manipulate the data received from TVision's audience measurement devices (including the [REDACTED] and

[REDACTED]

[REDACTED] systems, devices, and methods in addition to TVision’s other audience measurement devices)” and “any versions or variations of the foregoing.” Nielsen also accused any embodiments of U.S. Patent Publication No. 2018/0007431.

Discovery is just beginning. As such, Nielsen reserves the right to amend, alter, or supplement its Initial Claim Charts based on further investigation, fact or expert discovery, evaluation of the scope and content of the prior art, any claim construction rulings by the Court, or TVision’s non-infringement contentions. These Initial Claim Charts do not constitute any concession by Nielsen for purposes of claim construction or (in)validity.

Furthermore, these Initial Claim Charts are provided without prejudice to Nielsen’s rights to introduce at hearing or trial, any subsequently-discovered evidence or expert opinions relating to currently-known facts or Nielsen’s rights to produce and introduce at trial all evidence relating to the proof of subsequently discovered facts and evidence. Moreover, facts, documents, and things now known may be imperfectly understood, and accordingly, such facts, documents, and things may not be included in these Initial Claim Charts. Nielsen reserves the right to refer to, conduct discovery with reference to, or offer into evidence at the time of trial, any and all facts, expert-opinion testimony, documents, and things notwithstanding the written statements herein.

The information set forth below is provided without waiving: (1) the right to object to the use of any statement for any purpose, in this action or any other action, on the grounds of privilege, relevancy, materiality, or any other appropriate grounds; (2) the right to object to any request involving or relating to the subject matter of the statements herein; or (3) the right to revise, correct, supplement, or clarify any of the statements provided herein at any time.

These Initial Claim Charts are subject to Nielsen’s right to protect information subject to the attorney-client privilege and work-product doctrine. Nothing in these Initial Claim Charts

[REDACTED]

should be understood as reflecting Nielsen's proposed claim constructions, which will be provided at the appropriate time as listed in the Scheduling Order.

## **II. The Asserted Claims**

This disclosure of asserted claims remains preliminary and is based on the information that is available to Nielsen. Nielsen expressly reserves the right to amend and/or supplement this disclosure to include additional patents and/or claims. Nielsen expressly reserves the right to modify or amend the list of asserted claims based on the Court's claim constructions, any position taken by TVision in this action, any court orders, or to reflect additional information that becomes available to Nielsen as the case proceeds. Nielsen asserts United States Patent No. 11,470,243 ("the '243 Patent"), claims 4–6, 8, 11–14, 18–20.

## **III. The Accused Products, Systems, and Methods**

Nielsen incorporates by reference and adopts the identification of accused products set forth in its Disclosures Pursuant to Paragraph 4(a) of the Delaware Default Standard for Discovery dated February 10, 2023. Specifically, this includes all products, devices, systems or methods TVision makes, has made, licenses, purchases, practices, has practiced, uses, has used, sells, offers for sale, distributes, or imports, that perform audience measurement, including, but not limited to, audience measurement devices TVision provides to households that are to be associated with various household televisions or devices playing media. Nielsen specifically accuses TVision's [REDACTED] system, methods and devices and [REDACTED] system, methods and devices in addition to TVision's other audience measurement devices, systems, and methods. Nielsen also accuses TVision's servers and systems that collect and manipulate the data received from TVision's audience measurement devices (including the [REDACTED] and [REDACTED] systems, devices, and methods in addition to TVision's other audience measurement devices). Nielsen also accuses any versions or variations of the foregoing. Nielsen



[REDACTED]

also accuses any embodiments of U.S. Patent Publication No. 2018/0007431. In addition to the aforementioned devices, systems, or methods, Nielsen identifies any data or other information that is based on or derived from the information retrieved from the aforementioned devices, systems, or methods as another proper basis for damages, whether through a convoyed sales theory or otherwise.

This disclosure remains preliminary and is based on the information that is available to Nielsen. Nielsen expressly reserves the right to amend and/or supplement this disclosure to include additional accused products, methods, or services as it learns of them. Nielsen expressly reserves the right to modify or amend the accused products, methods, or services based on the Court's claim constructions, any position taken by TVision in this action, any court orders, or to reflect additional information that becomes available to Nielsen as the case proceeds.

#### **IV. Initial Claim Charts**

The full text of each claim of the '243 patents are set forth in the Initial Claim Charts for the [REDACTED] Device (Appendix A) and the [REDACTED] Device (Appendix B). The applicable statutory subsection of 35 U.S.C. § 271 is subsection (a). Moreover, each claim limitation is present either literally or is present under the doctrine of equivalents. Nielsen reserves the right to amend this disclosure if warranted.



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*Attorneys for Plaintiff The Nielsen Company  
(US), LLC*

# Exhibit 3

**From:** [Lewis, Douglas](#)  
**To:** [Eric Cohen](#); [Jason Xu](#)  
**Cc:** [Andrew Russell](#); [Nate Hoeschen](#); [Brown, Andrew L.](#); [Moore, David E.](#); [Palapura, Bindu A.](#); [Yovits, Steven](#); [Nielsen TVision team](#)  
**Subject:** Nielsen v. TVision/follow up to M&C call  
**Date:** Tuesday, January 16, 2024 12:26:10 PM

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Eric and Jason,

I am writing about the issues discussed during our call last Friday, January 12, 2024.

First, as I indicated during our call, Nielsen does not agree to your proposal to consolidate its three pending cases against TVision and to stay them. You proposed staying all three cases and trying the last case filed, presumably 1:23-cv-01346, first in early 2026. As I explained during the call, all three cases are at different parts of their lifecycle and consolidating them will necessitate moving the trial date scheduled for later this year in the 0057 case. We also do not agree with your assertion that the cases have significant factual overlap or that consolidating would advance judicial economy or lower the cost of proceeding. Indeed, consolidation, and your proposal in particular, would do nothing except allow TVision to put off a reckoning for its patent infringement.

Second, we do not agree to a stay in the 1345 case (involving the '243 patent). That case has been pending for about 15 months and has progressed significantly. It is too late to request a stay.

Third, regarding TVision's proposal to ask ACRCLOUD for its source code and to allow the parties' experts to review and opine on that, Nielsen notes that fact discovery closed some time ago. It is too late to bring new documents into the case and to reopen expert reports. [REDACTED]

[REDACTED]  
[REDACTED] TVision cannot change its mind after discovery has closed, causing us to incur unnecessary expense and delay.

Finally, regarding Ms. Poppie's disclosure in our supplemented initial disclosures, we are willing to allow TVision to depose her. We are working to get dates in the next few weeks. Ms. Poppie is located in the Chicago area. We can make our Chicago office available for the deposition, if you'd like.

**DOUGLAS LEWIS**

Kelley Drye & Warren LLP  
Tel: (312) 857-7073

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